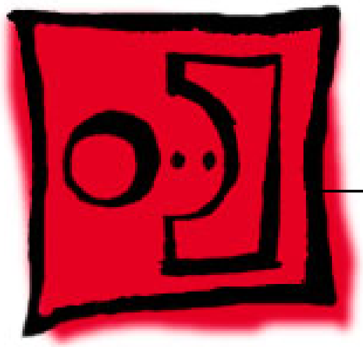
Service Source

iMac G5 (17-inch)

(24 September 2004)

© 2004 Apple Computer, Inc. All rights reserved.

Service Source



Take Apart

iMac G5 (17-inch)

© 2004 Apple Computer, Inc. All rights reserved.

General Information

Take Apart Procedures

Note: This manual covers two iMac G5, 17-inch models; one is the Education model with no optical drive. Some models may look slightly different from the one shown in the illustrations; however, except where indicated, the following procedures apply to all models.

Tools

The following tools are required to service the computer:

- Use the screwdriver provided, or a magnetic Phillips #1 screwdriver
- Flatblade screwdriver
- Jeweler's flatblade screwdriver
- Nylon probe tool (black stick 922-5065)
- Needlenose pliers
- Soft cloth (for protect removed parts from scratches)

Parts Requiring Midplane Replacement

The following are not separate, orderable parts. To replace them, you must replace the midplane assembly.

- Fan(s)
- Main logic board
- Midplane chassis
- Logic board cables
- Speakers
- I/O panel

Parts Requiring Display/Bezel Replacement

The following are not separate, orderable parts. To replace them, you must replace the display/bezel assembly.

- Flat panel display
- TMDS video cable
- Inverter-to-display cable
- Display bezel housing (white plastic)

Service Modules

1. Midplane Assembly (with or without Bluetooth)
2. Display and Bezel assembly
3. Hard drive, with carrier (Serial ATA or Parallel ATA found only on the education model)
4. Power supply
5. Optical drive
6. Backup battery
7. AirPort Extreme card
8. Memory DIMMs, DDR 400
9. Inverter
10. Back Cover and Foot
11. Fan Cover (only on 17-inch with Serial ATA drive)

Important Things to Know

1. A spares kit is included with the replacement part. All spares kit include the Phillips #1 and extra screws. There are additional items that are included with the hard drive, the midplane, and the display/bezel assembly. Their spares kit are listed below.

   Hard drive kit
   - a Phillips #1 screwdriver
   - an extra thermal sensor cable
   - extra screws

   Midplane kit
   - a Phillips #1 screwdriver
   - an extra LED gasket/light tube (located on the underside of the midplane)
   - extra screws

   Display/Bezel kit
   - a Phillips #1 screwdriver
   - an extra LED gasket/light tube (located on the underside of the midplane)
   - extra screws

2. All customer removable screws are brass colored. **Do not remove screws unless they are brass colored, or you will void your warranty.**
3. Ground yourself when working on the computer. The procedure will show you how to ground yourself.
4. Do not pull on individual wires when disconnecting a part; pull on the connector.

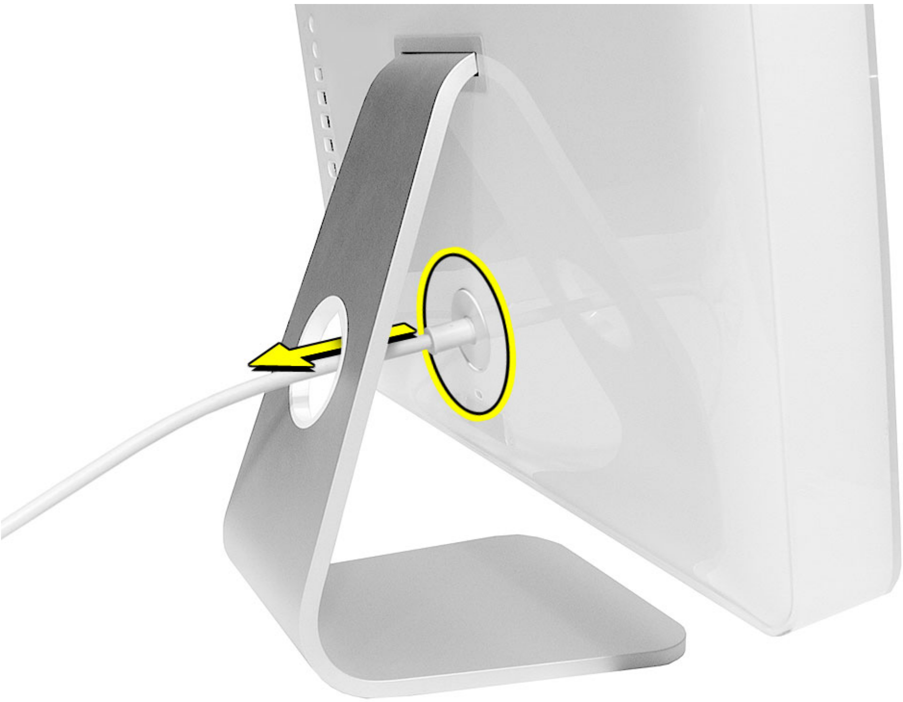
Removing the Back Cover

Tools

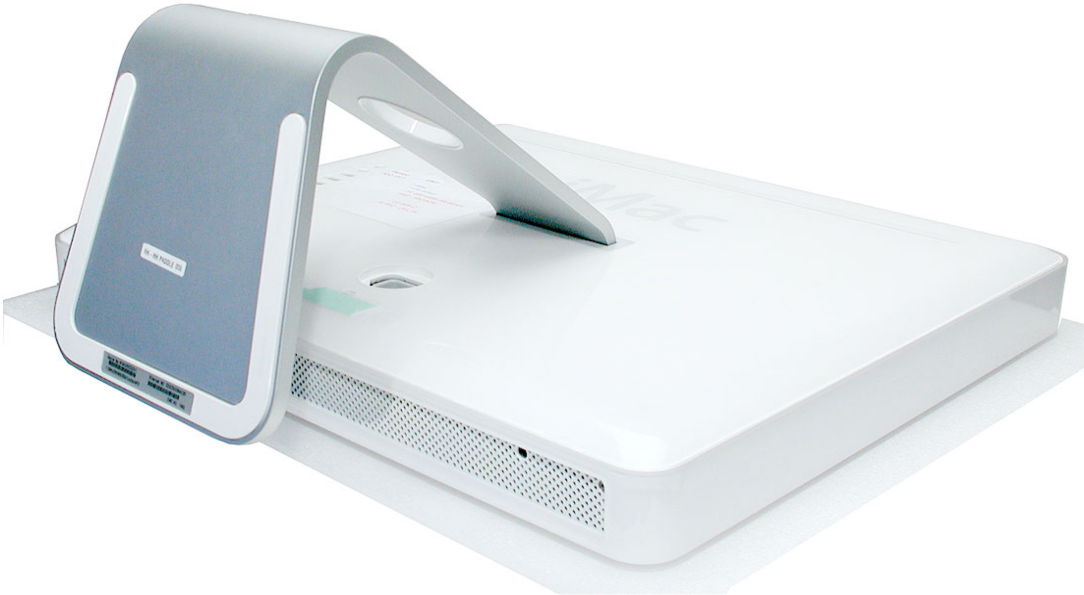
Use the screwdriver provided, or a Phillips #1 screwdriver

Procedure

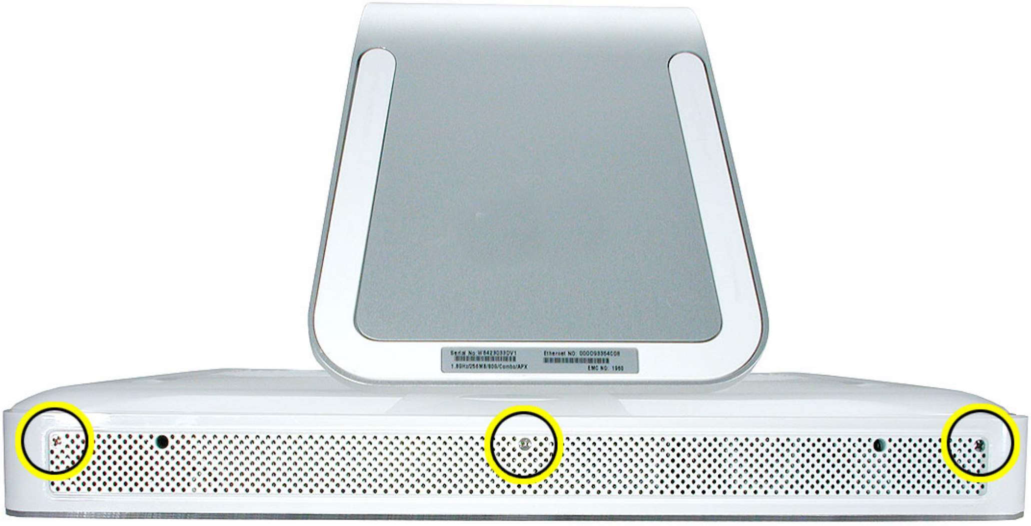
1. Turn your computer off by choosing Shut down from the Apple () menu.
2. Disconnect all cables, and unplug the power cord from your computer. Put on your ESD Wrist strap.



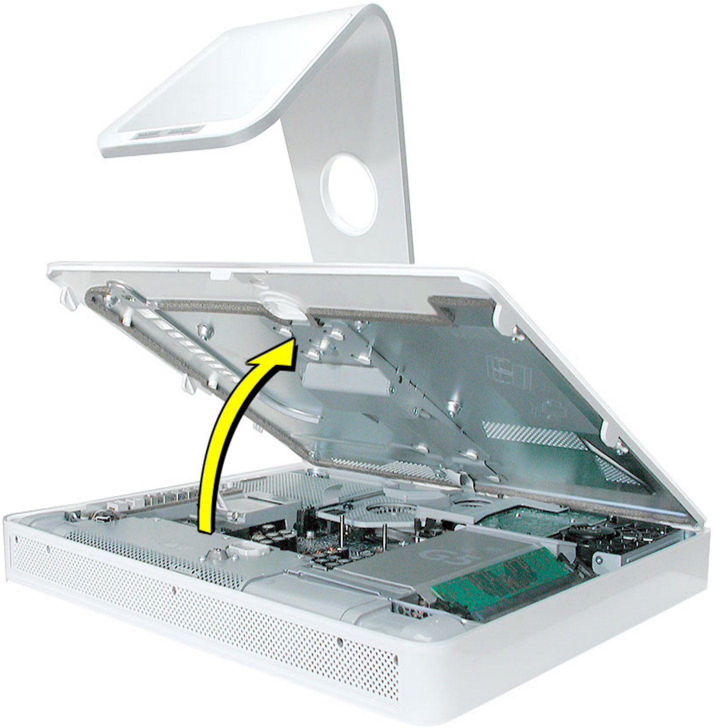
3. Place a soft, clean towel or cloth on the desk or surface. Hold the sides of the computer and slowly lay the computer face down as shown.



4. Locate the three case screws circled below. You may have to lift the metal foot to locate the middle case screw. **Note:** These screws are captive; they are part of the display/bezel assembly and cannot be removed.
5. Using the tool provided, or a Phillips #1 screwdriver, loosen the three captive screws. **Note:** Turn the screws counterclockwise until they stop turning.



6. Holding the back cover by the metal stand, tilt the cover up and lift it off the computer. Set the back cover aside.



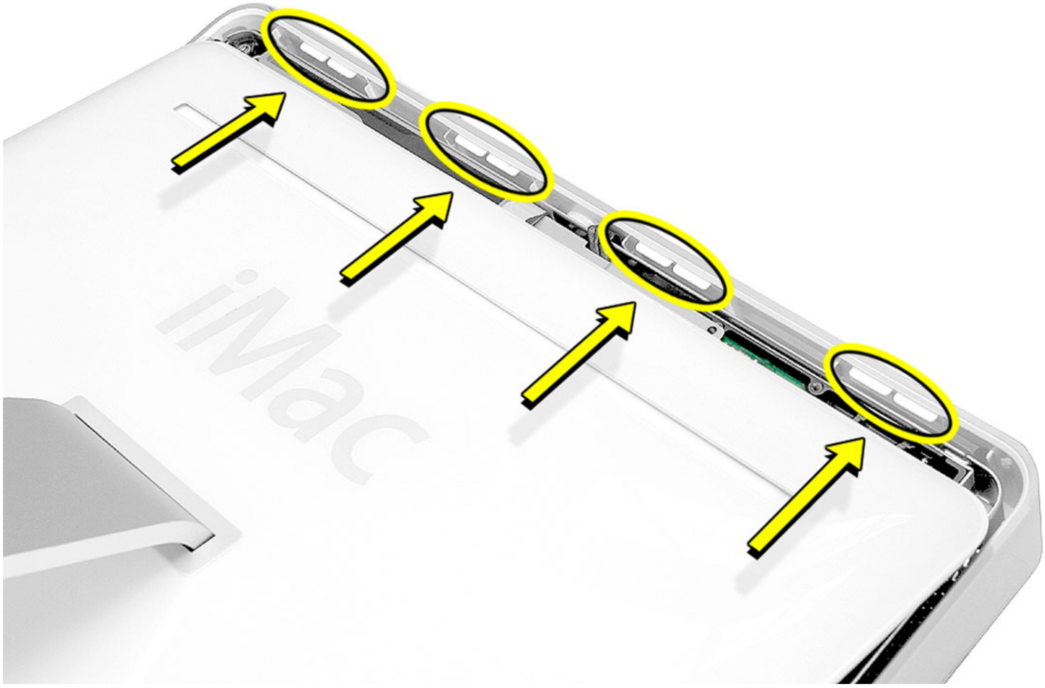
Replacing the Back Cover

Tools

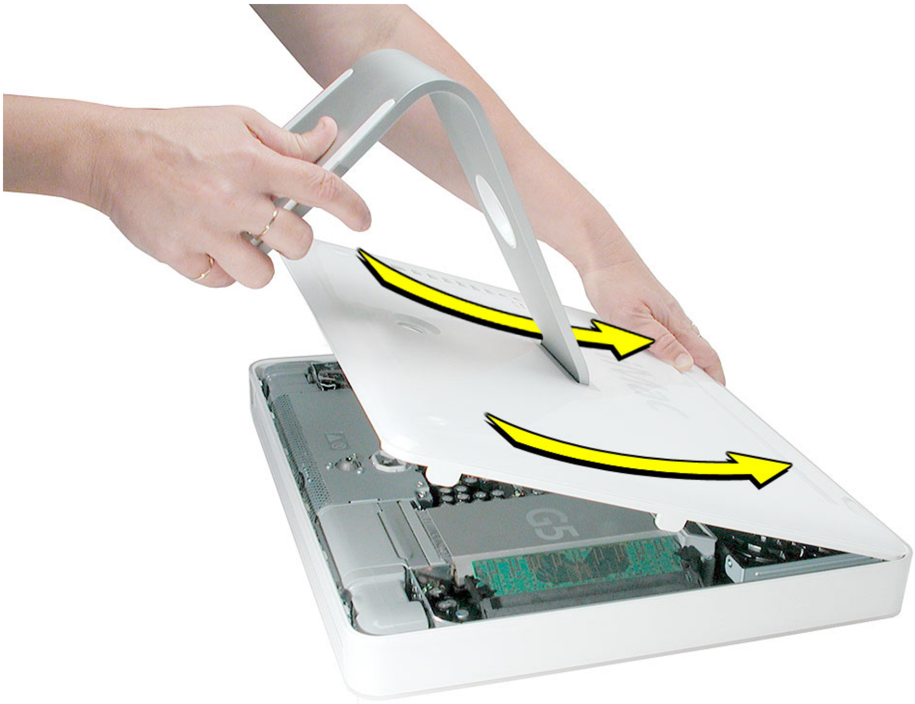
Use the screwdriver provided, or a Phillips #1 screwdriver

Procedure

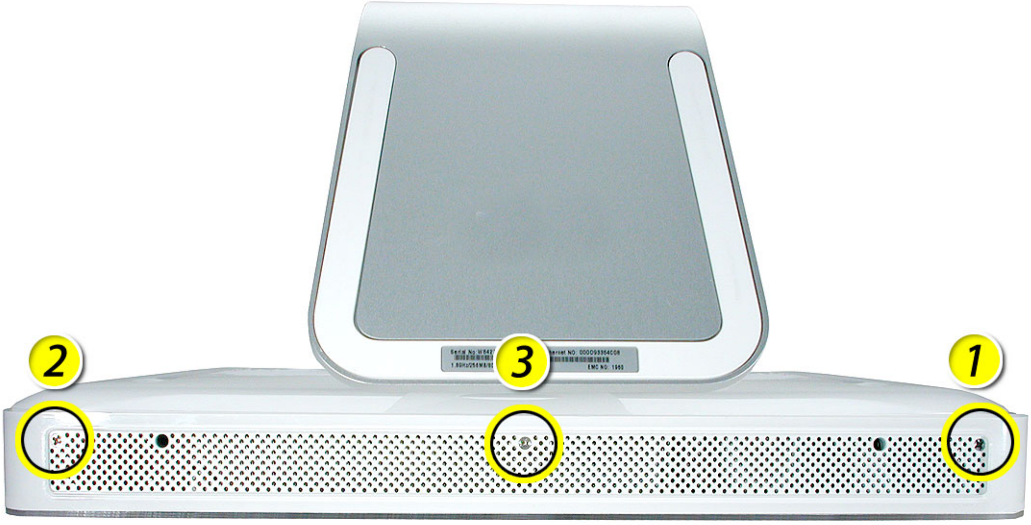
1. Remove the replacement back cover and foot from its packaging.
2. Replace the cover so that the slots on the top edge of the back cover mate with the tabs on the display housing.



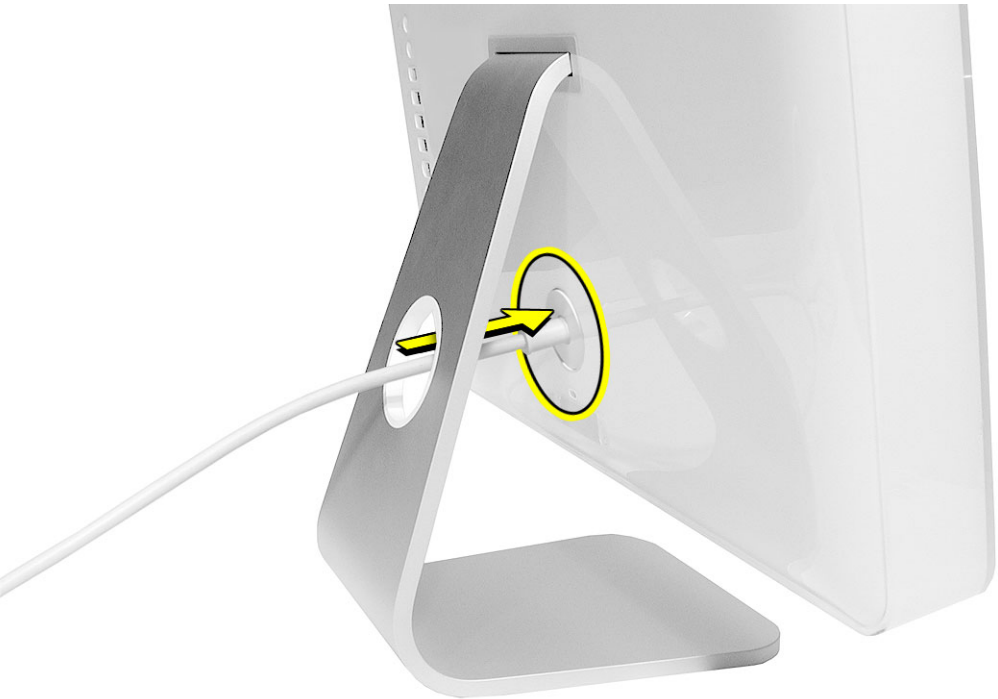
3. Lower and press the cover into place until it fits snugly on the computer.



4. Tighten the case screws by turning them clockwise. You might need to tighten the middle screw first, then adjust the corner screws so the case settles into the display/bezel.



5. Position the computer in the upright position. Reconnect the power cord and remaining cables. Turn on the computer.



Serial ATA Hard Drive

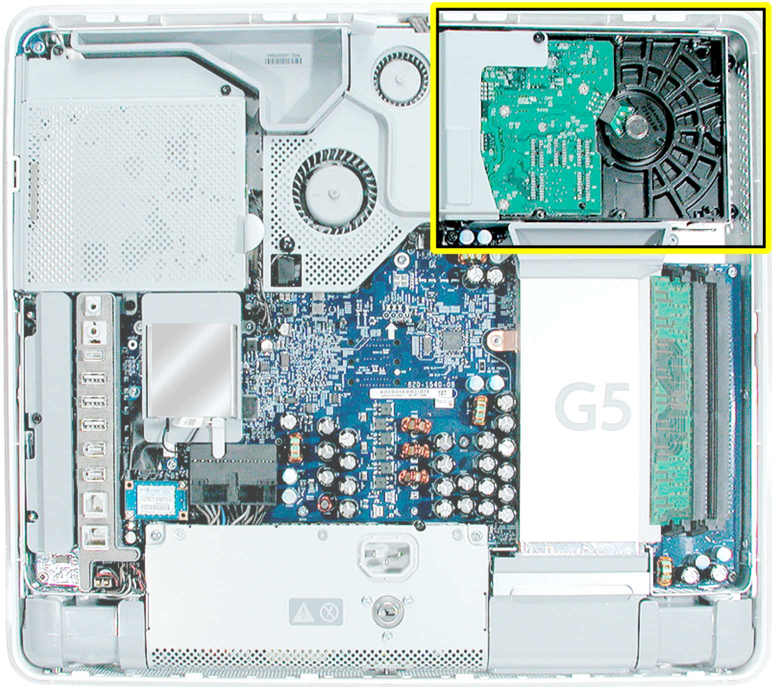
Tools

- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Flatblade screwdriver
- Screw tray or something equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

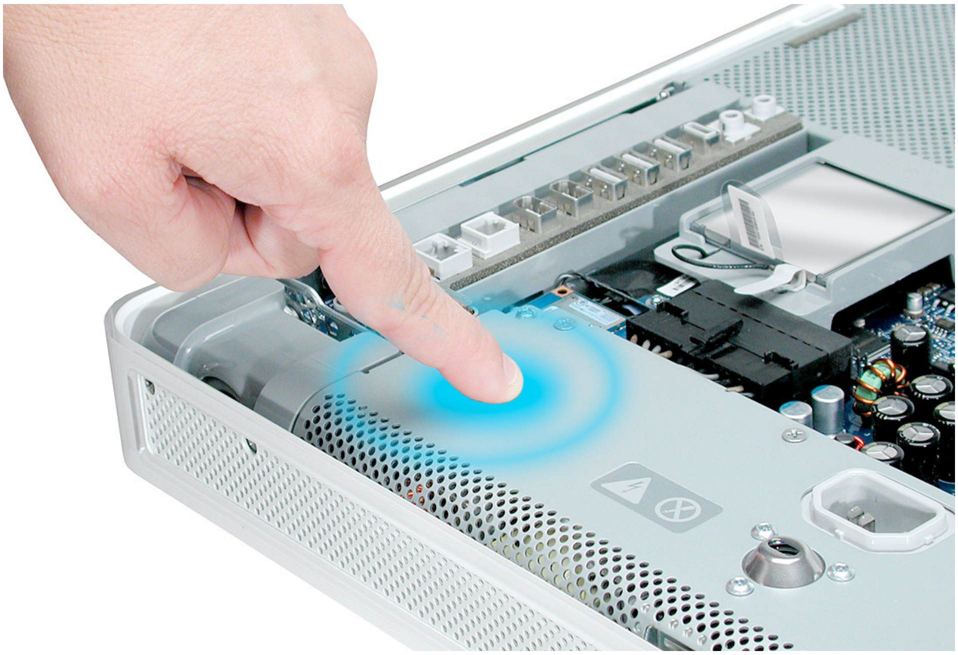
Part Location



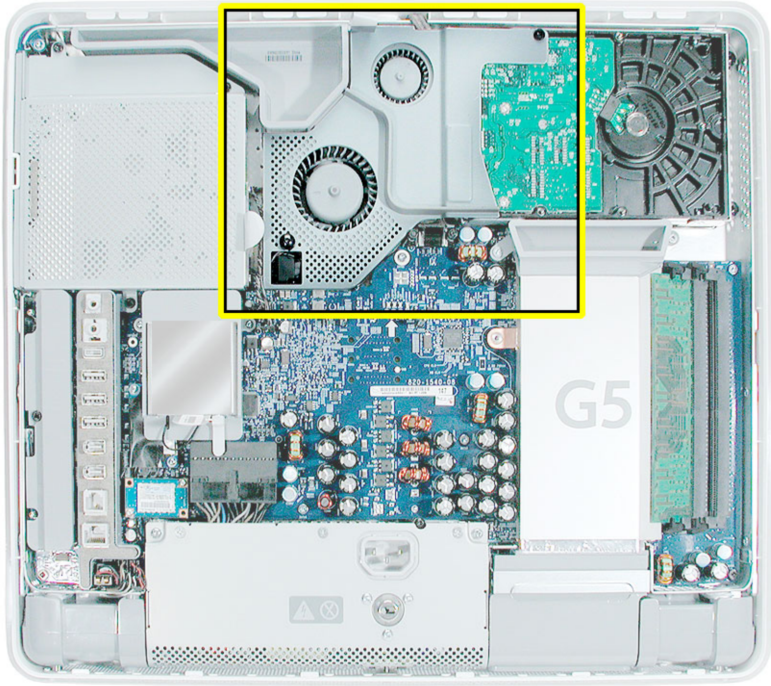
Removing the Serial ATA Hard Drive

1. To access the hard drive you must first remove other service modules. This procedure will show you how to remove and replace these modules. **Note:** As you remove each module, set it aside, along with the screws for that module.
2. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

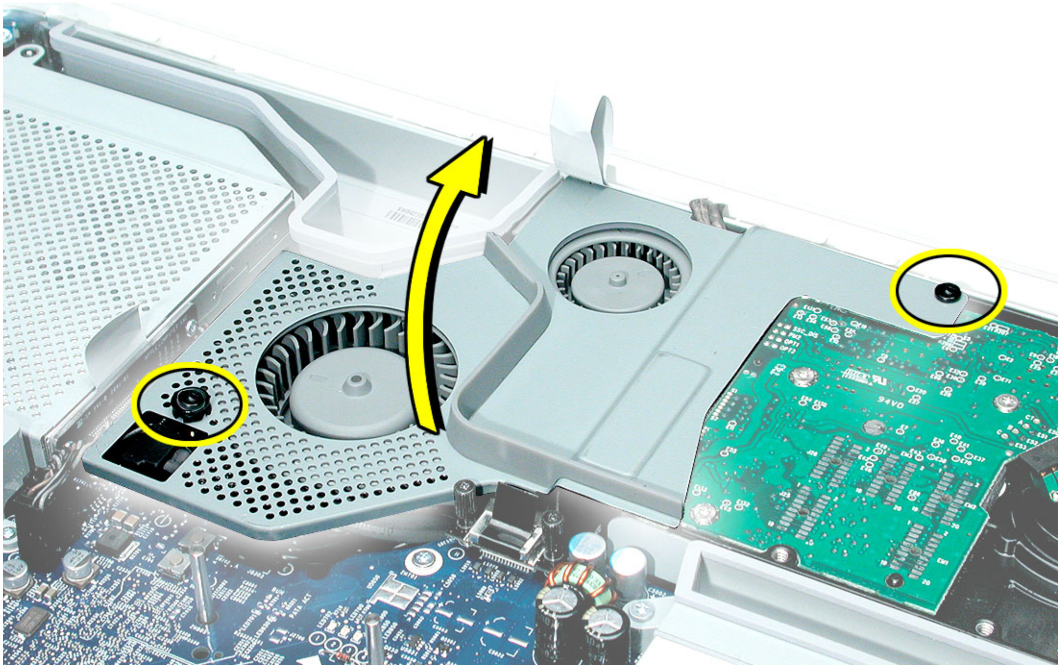
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



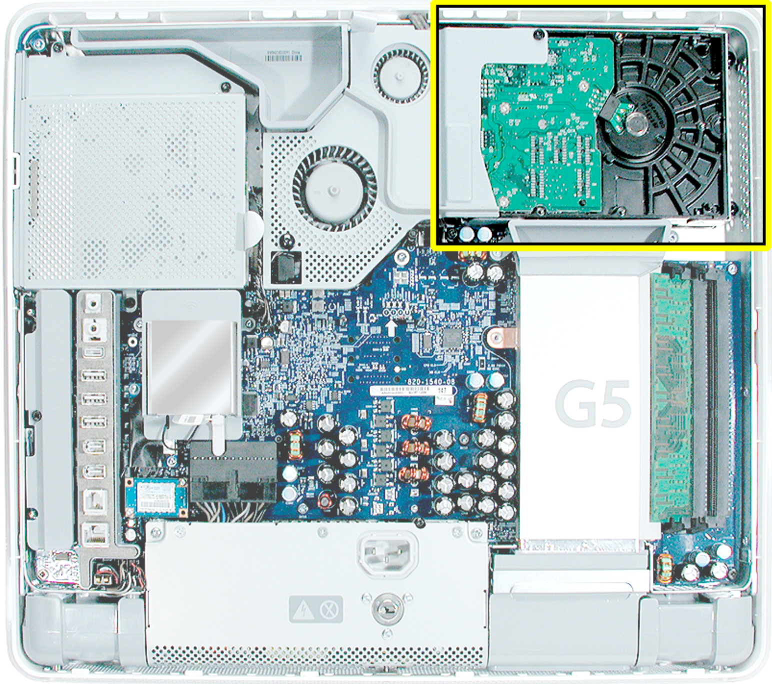
3. Locate the fan cover near the top of the computer.



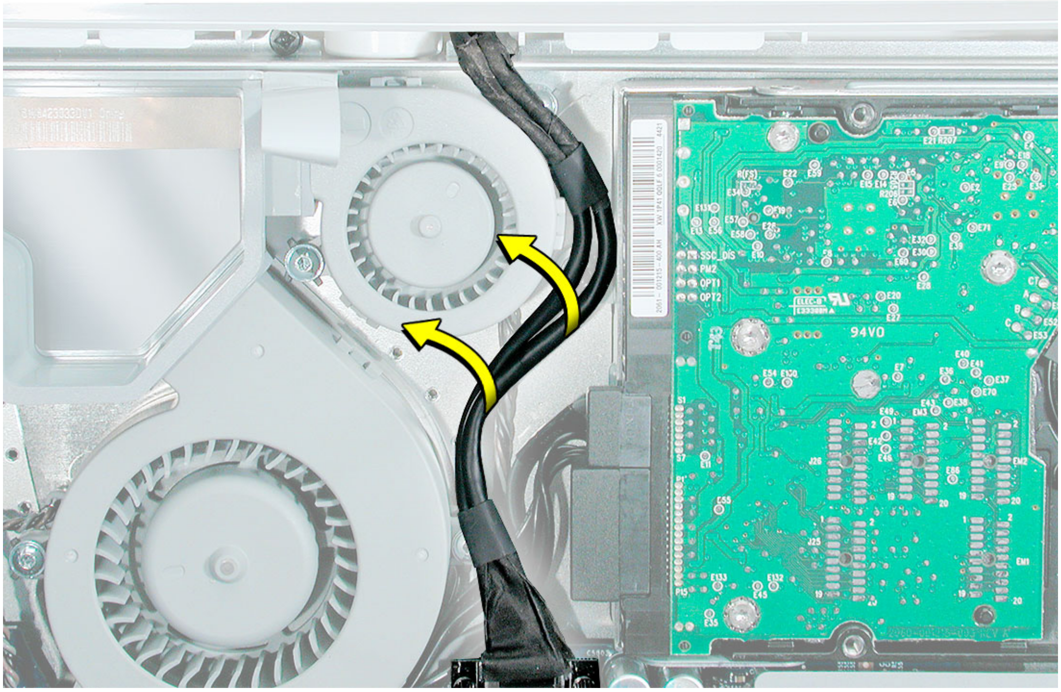
4. Using the tool provided, or a Phillips #1 screwdriver, remove the two fan cover screws and lift the fan cover off the computer. Set the screws and fan cover aside.



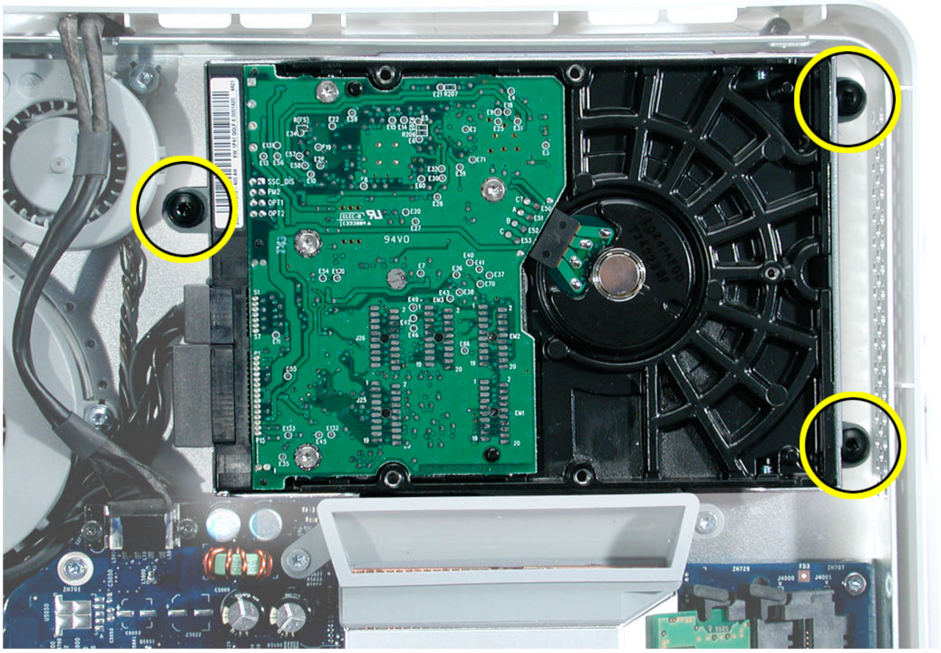
5. Locate the hard drive in the top right corner.



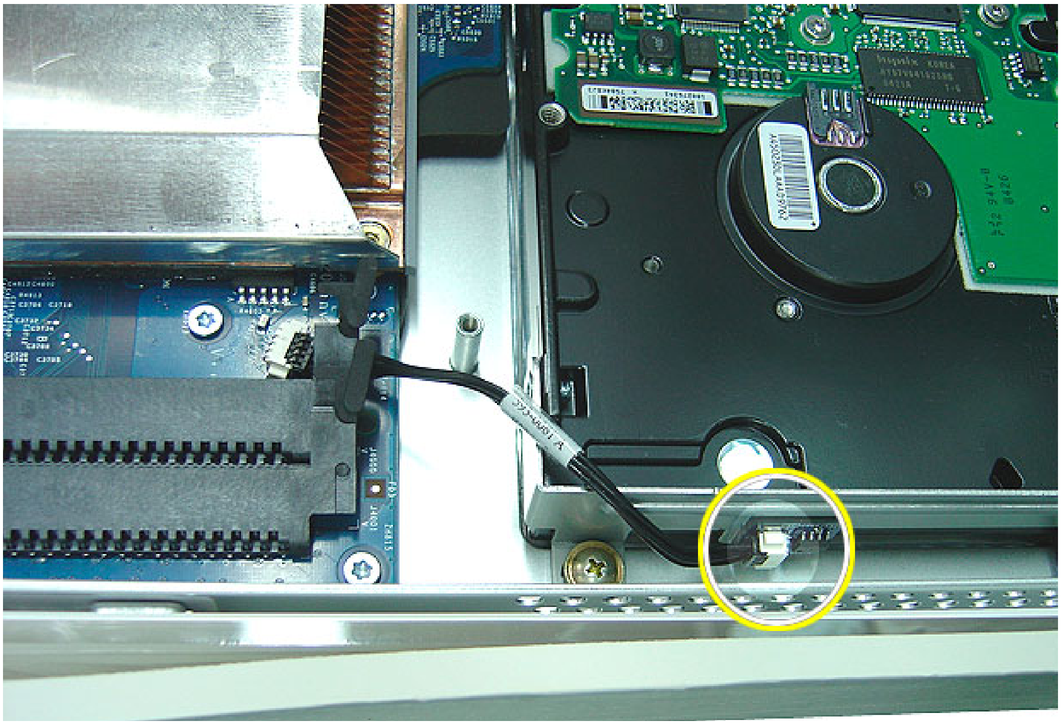
6. Move the black video cable (located to the left of the hard drive) out of the way to access a hard drive screw.



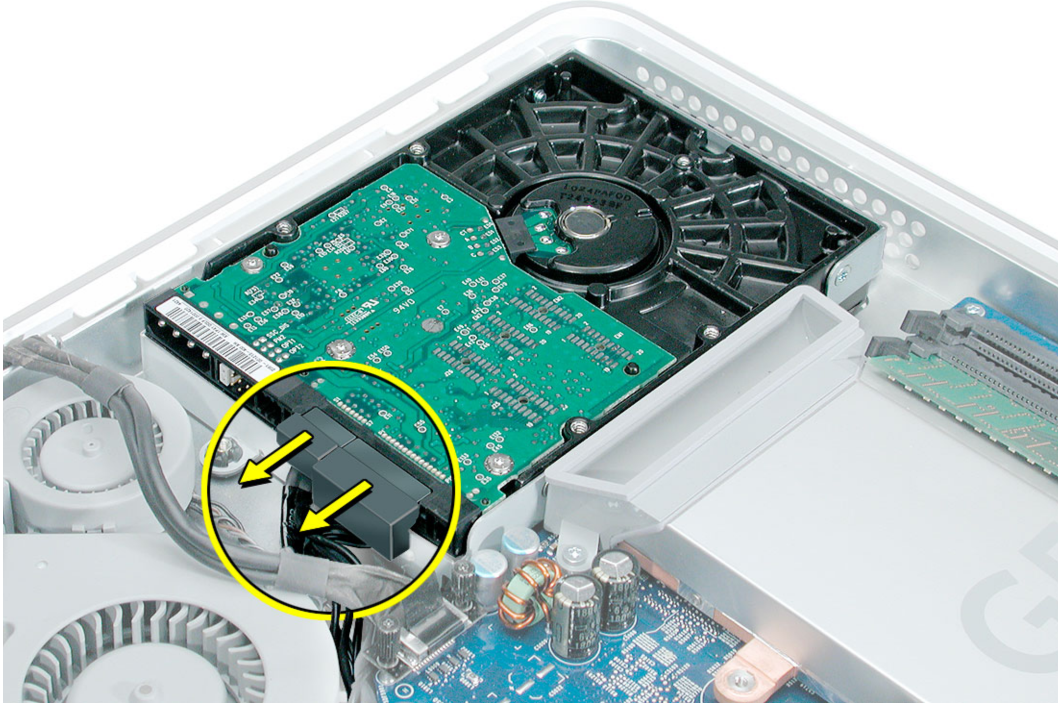
4. Remove the three hard drive screws. Set the screws aside.



5. Carefully lift the hard drive straight up, about one inch, and disconnect the black cable from the white connector on the hard drive. **Note:** Leave the other end of the cable attached to the logic board.



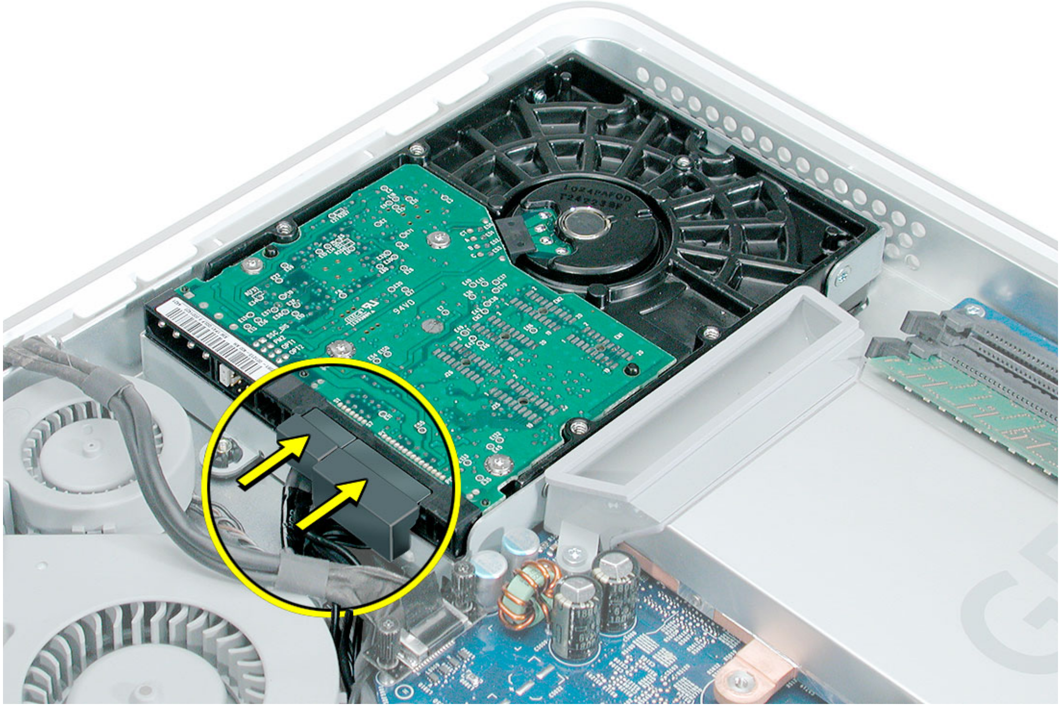
6. Using your fingers, or a flatblade screwdriver, disconnect the drive data cable and power cable from the hard drive.



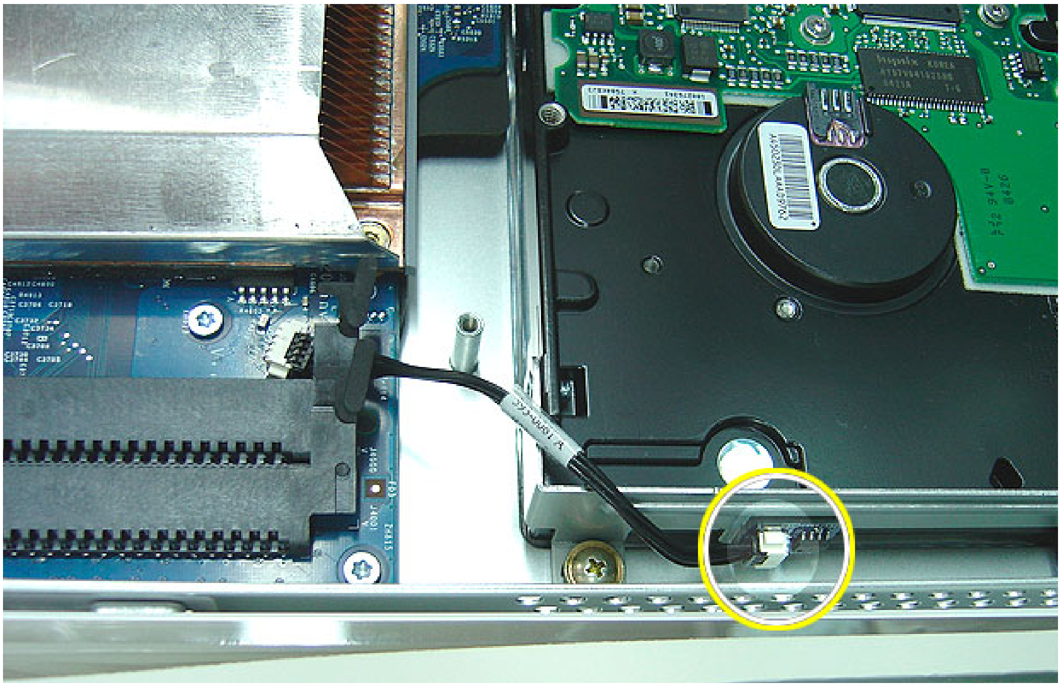
7. Lift the hard drive up and out of the midplane assembly.**Important:** Return this hard drive to Apple in the packaging provided.

Replacing the Serial ATA Hard Drive

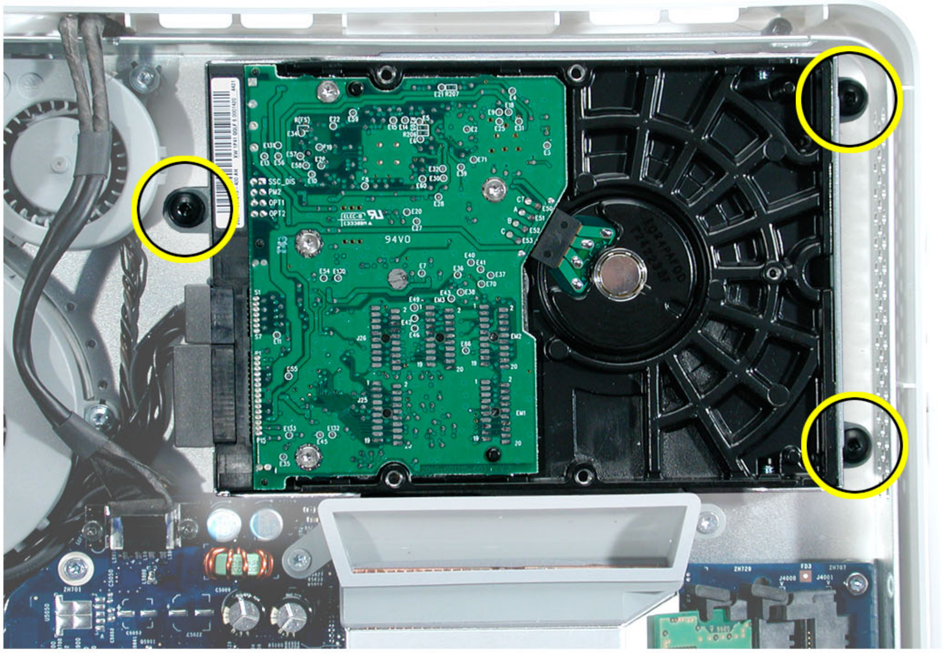
1. Remove the replacement hard drive from its packaging.
2. Connect the drive data cable and power cable to the hard drive. Lower the hard drive into place on the midplane.



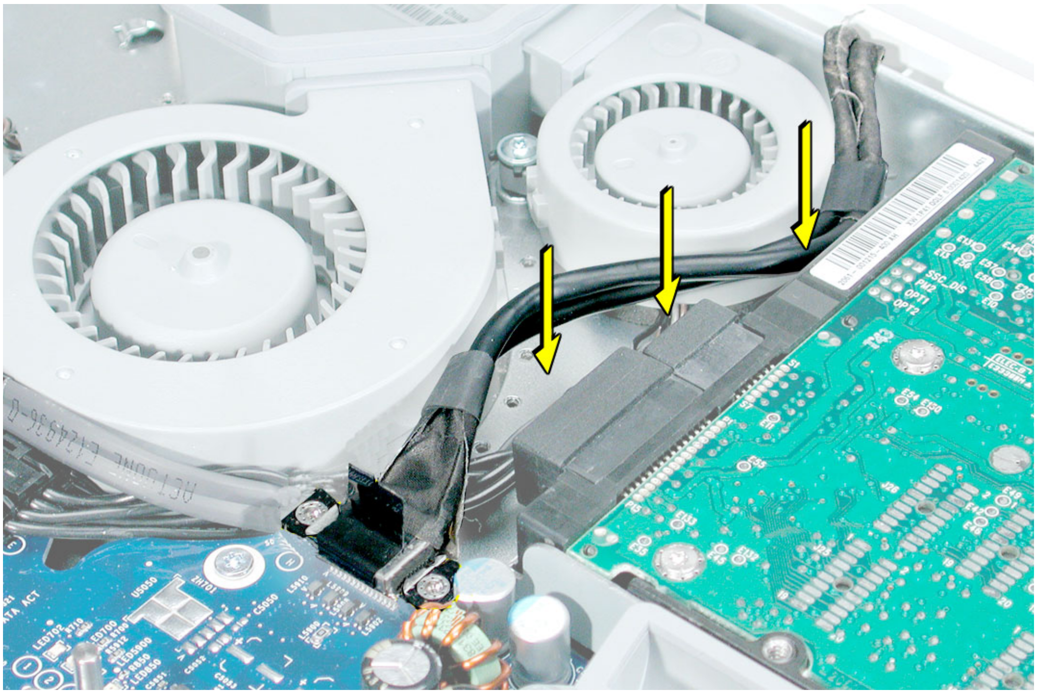
3. Connect the black cable to the white connector on end of the hard drive.



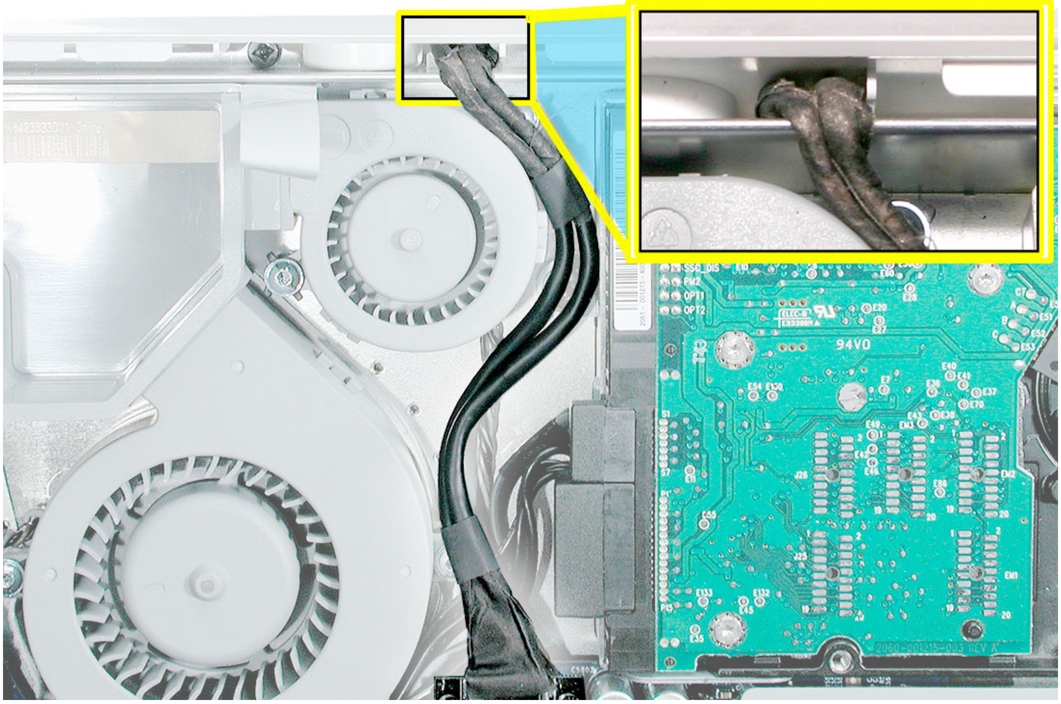
4. Replace the three hard drive screws.



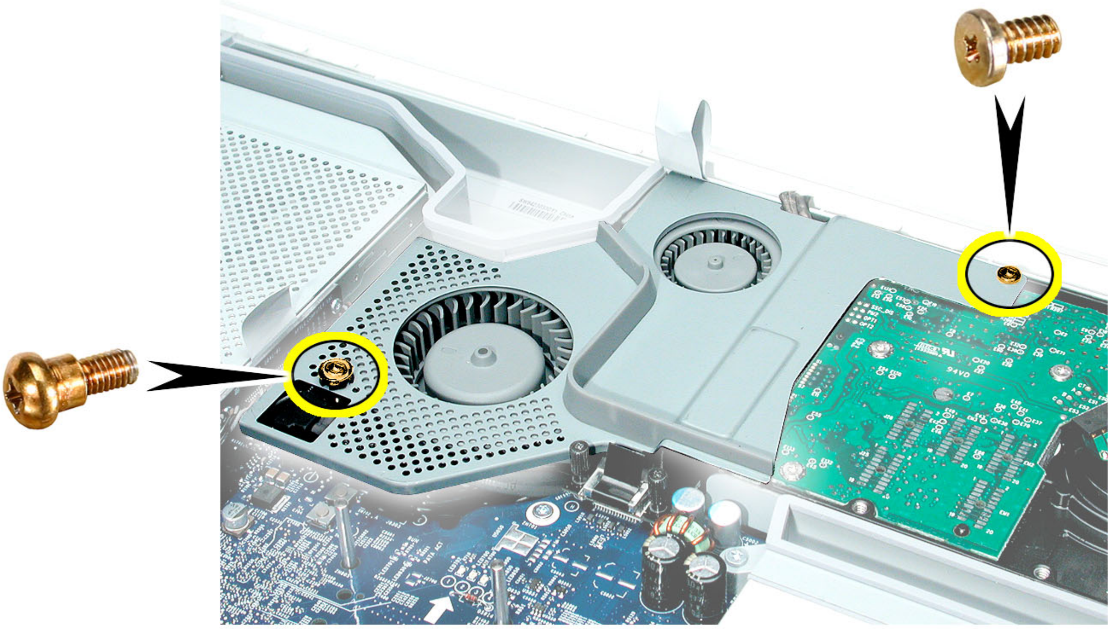
5. Tuck the black video cable into the area shown by the arrows.



6. Press the video cable into the notch on the midplane chassis.



4. Replace the two fan cover screws. The larger screw attaches on the left. **Note:** Make sure the pull tab is sticking up as shown



Parallel ATA Hard Drive

Tools

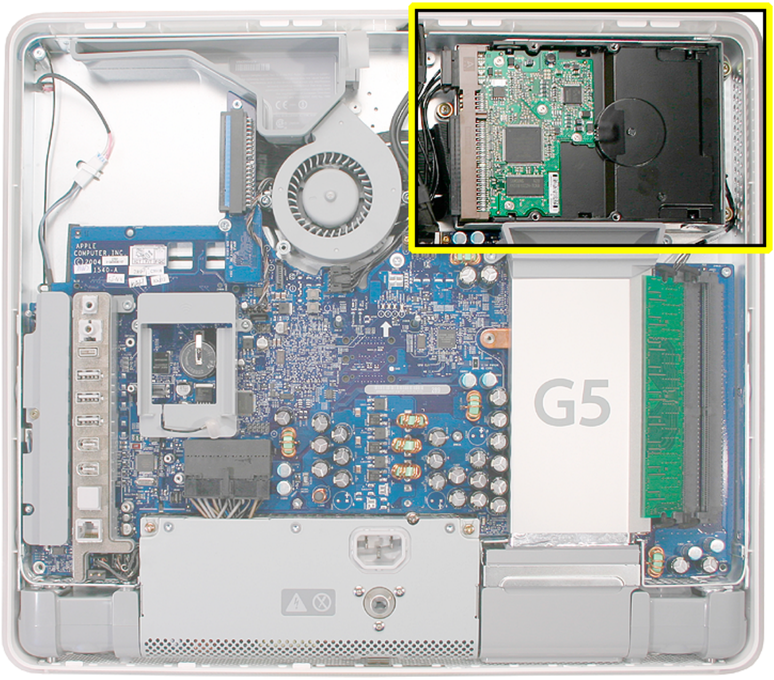
- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or something equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

Part Location

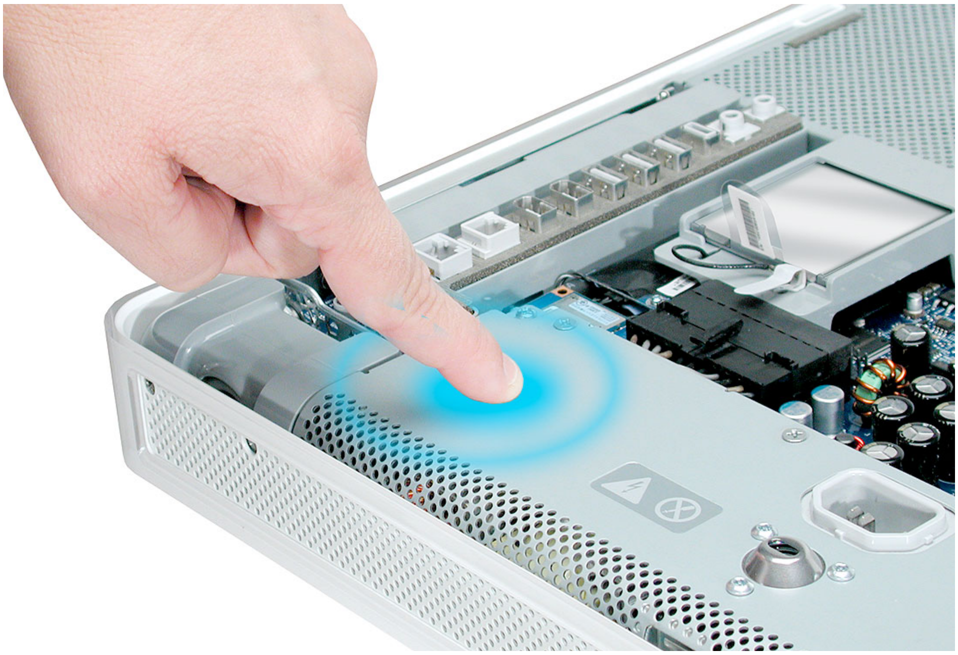
Note: The Parallel ATA hard drive is only available on the Education model.



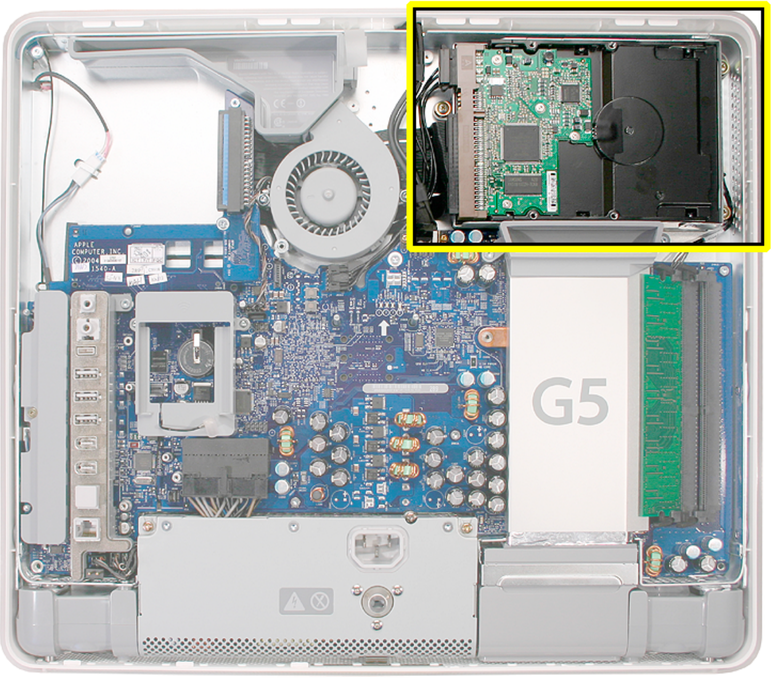
Removing the Parallel ATA Hard Drive

1. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

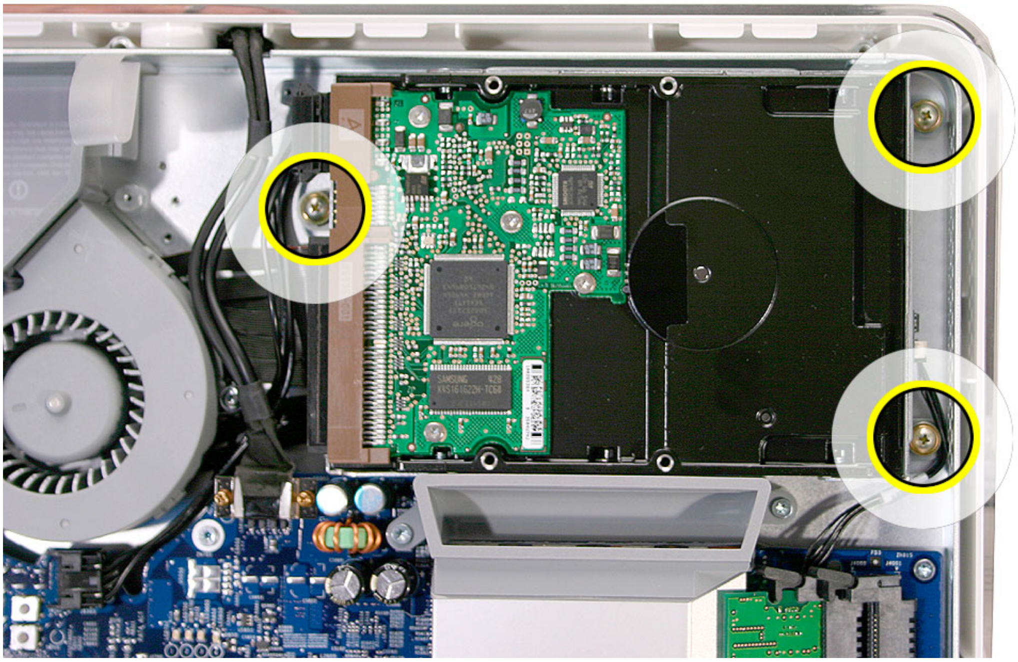
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



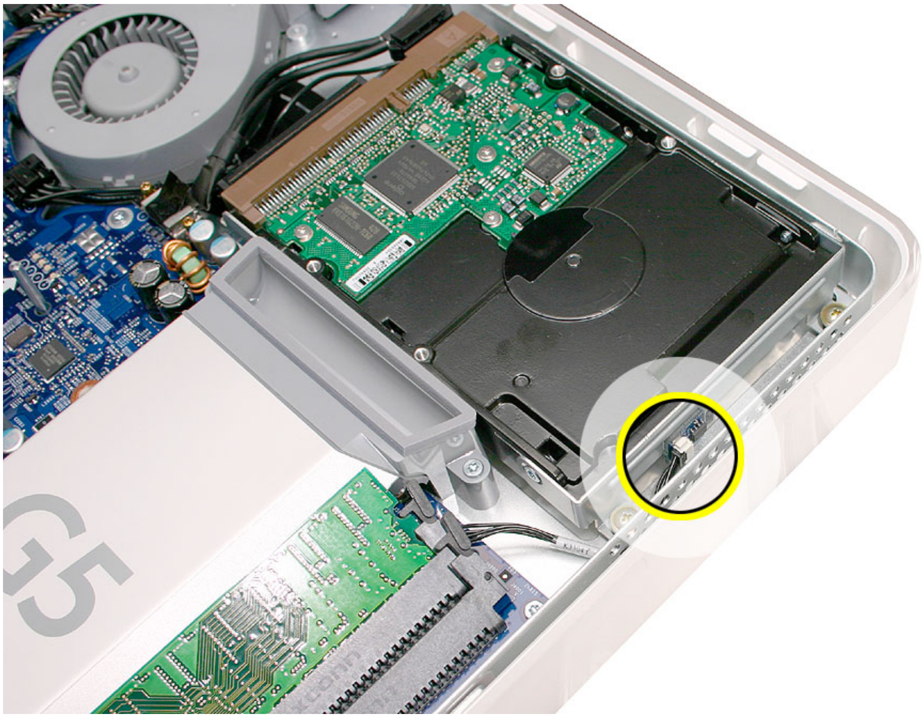
2. Locate the parallel ATA hard drive in the top right corner.



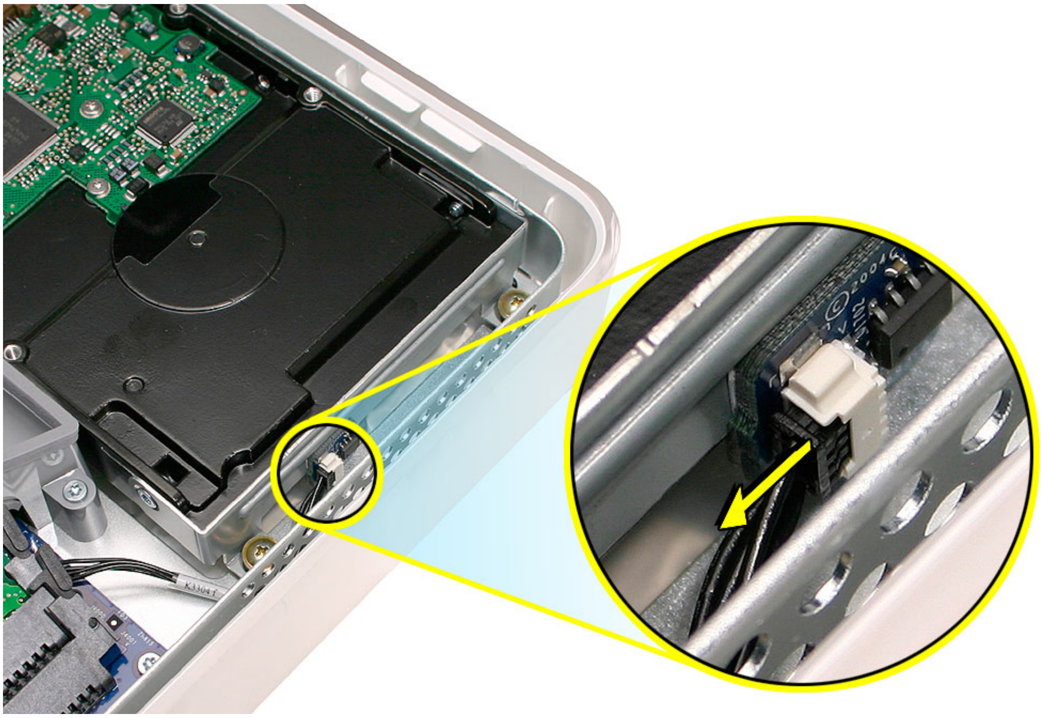
4. Remove the three hard drive screws. Set the screws aside.



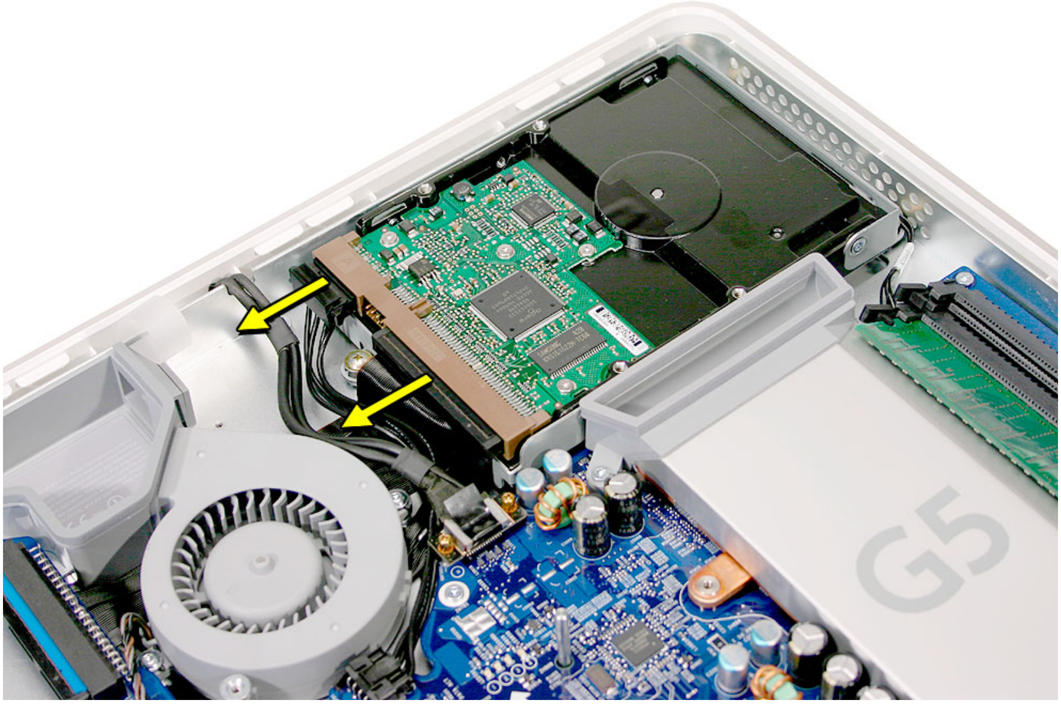
5. Locate the white connector on the end of the hard drive.



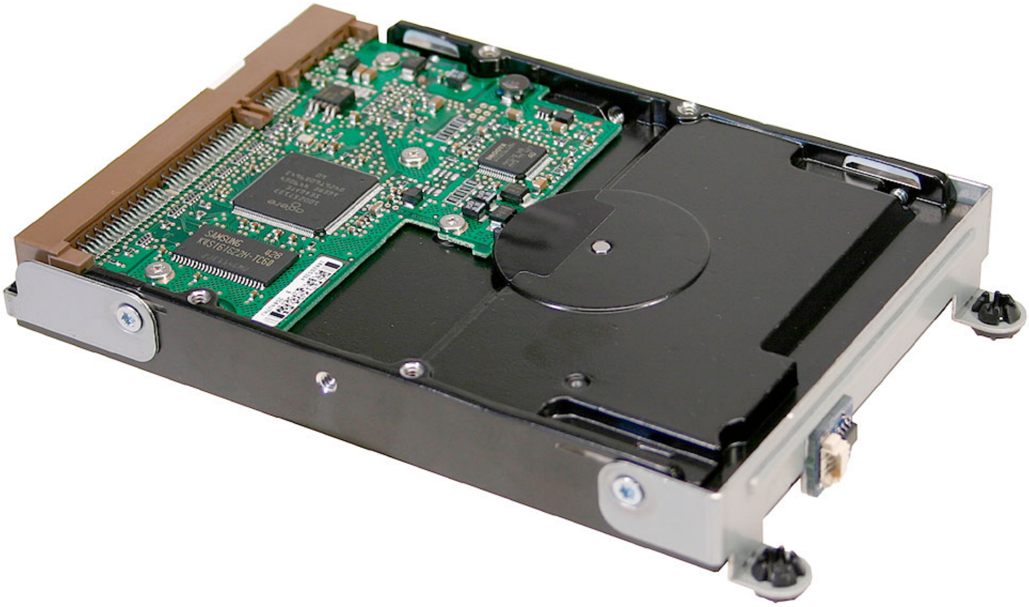
6. Carefully lift the hard drive straight up, about one inch and disconnect the black cable from the white connector. **Note:** Leave the other end of the cable attached to the logic board.



7. Using your fingers, disconnect the drive data cable and power cable from the hard drive.

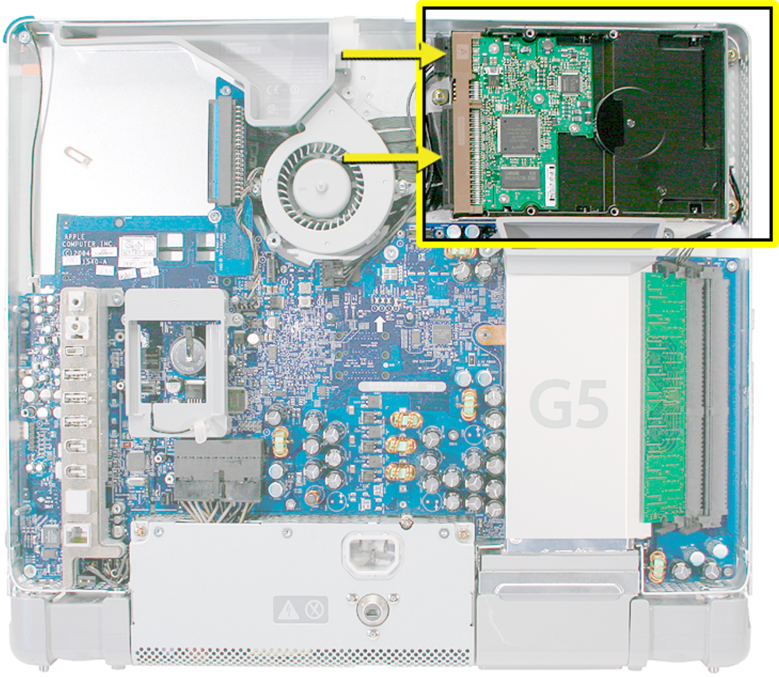


8. Lift the hard drive up and out of the midplane assembly.**Important:** Return this hard drive with the carrier to Apple in the packaging provided.

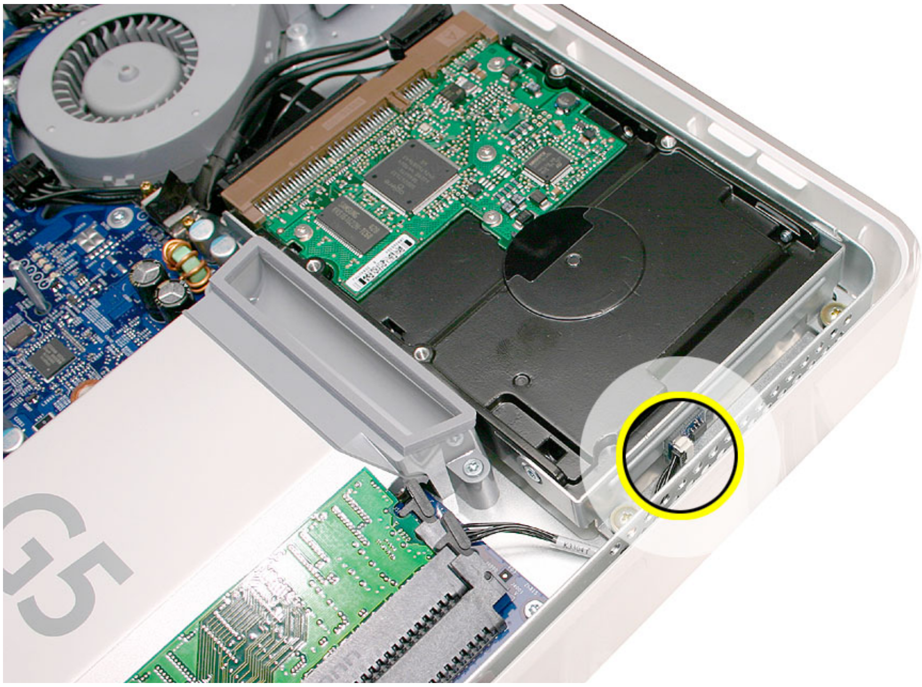


Replacing the Parallel ATA Hard Drive

1. Remove the replacement hard drive from its packaging.
2. Connect the drive data cable and power cable to the hard drive. Lower the hard drive into place on the midplane.

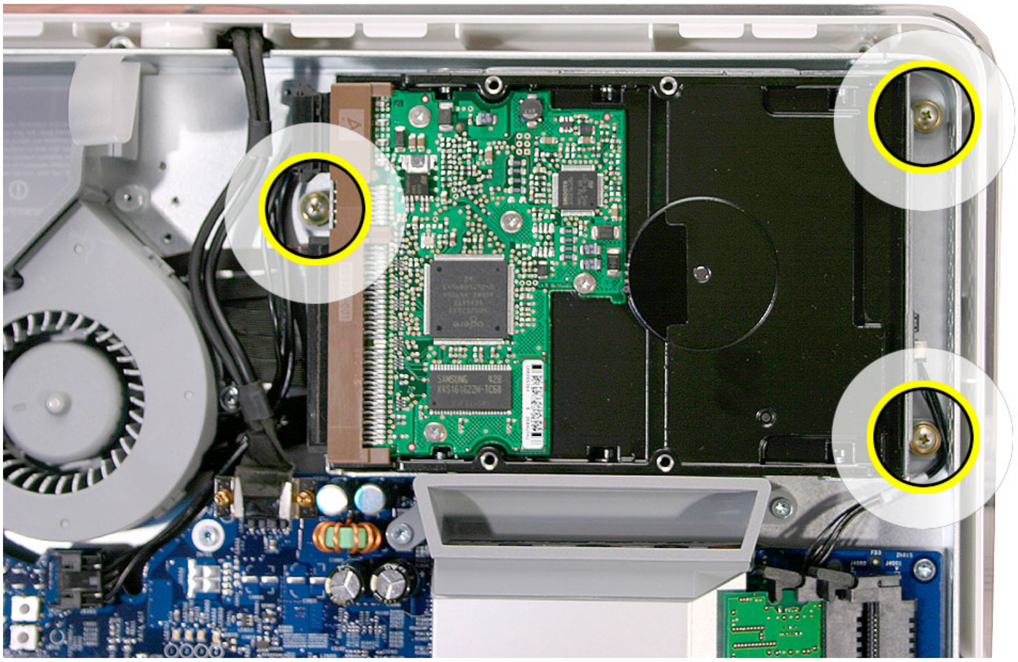


3. Connect the black cable to the white connector on end of the hard drive.

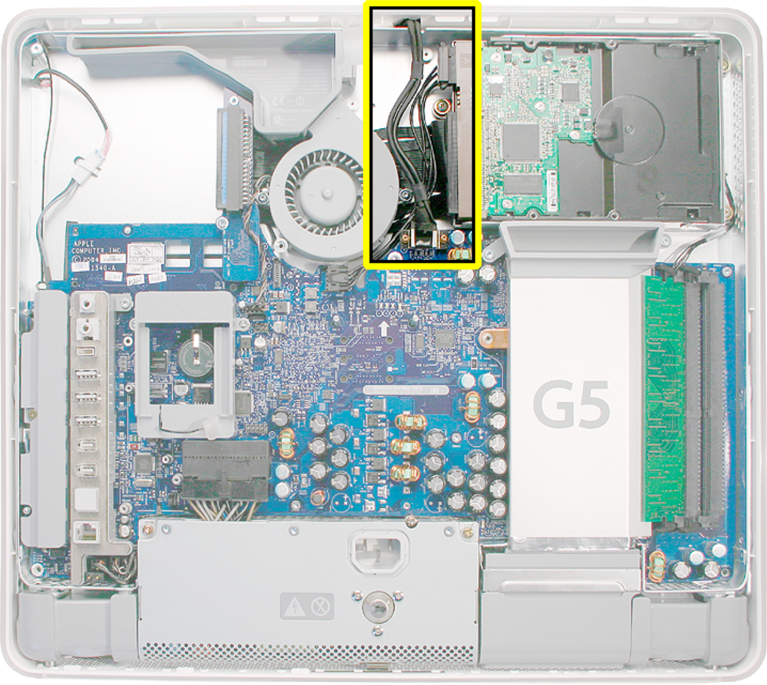


4. Replace the three hard drive screws.

.



5. Before replacing the back cover, tuck the black video cable into the space next to the hard drive.



Optical Drive

Tools

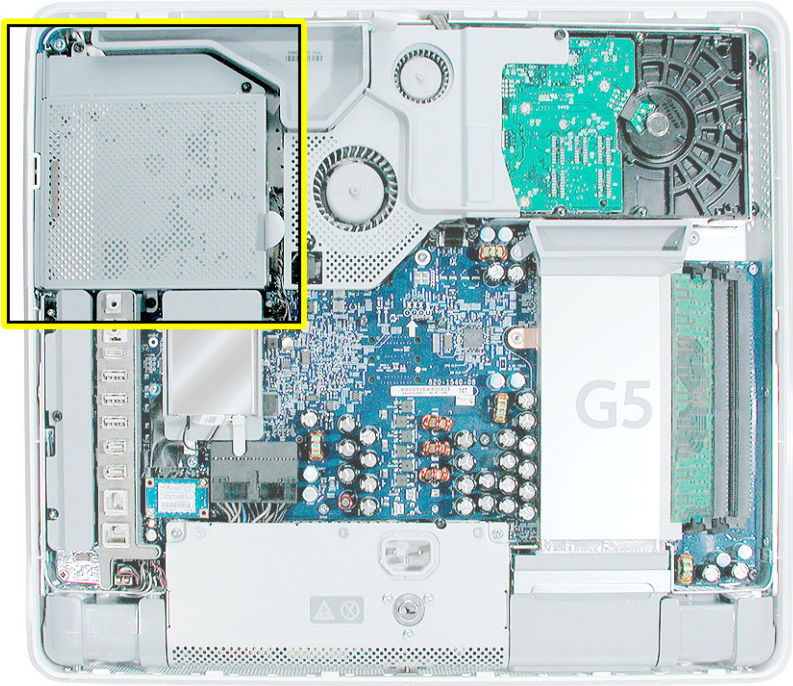
- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

Part Location

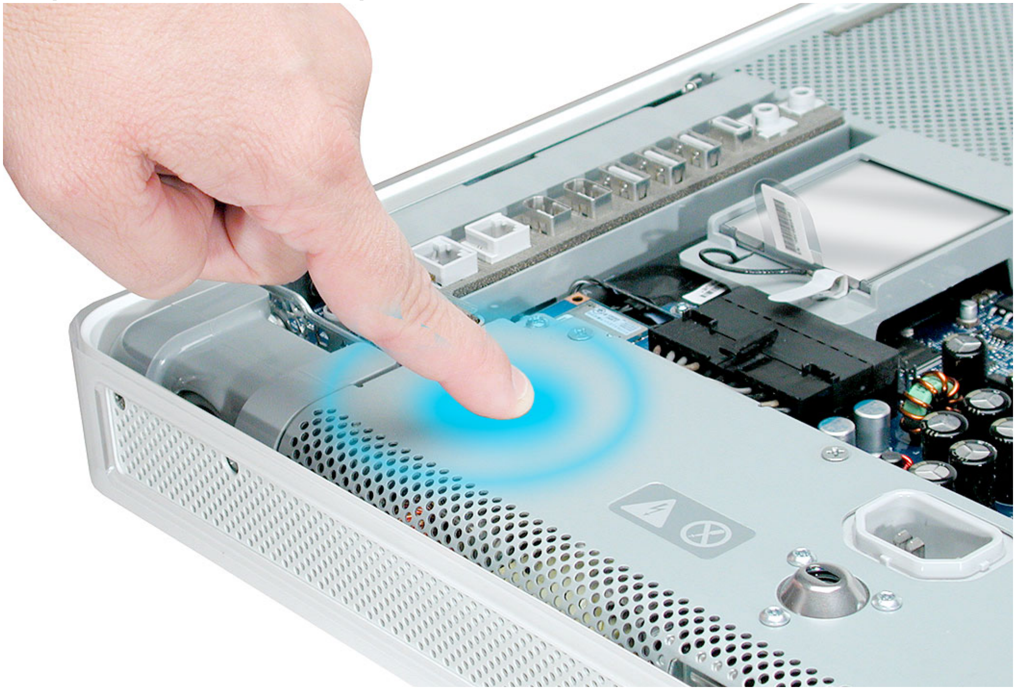
Note: The education models do not have an optical drive.



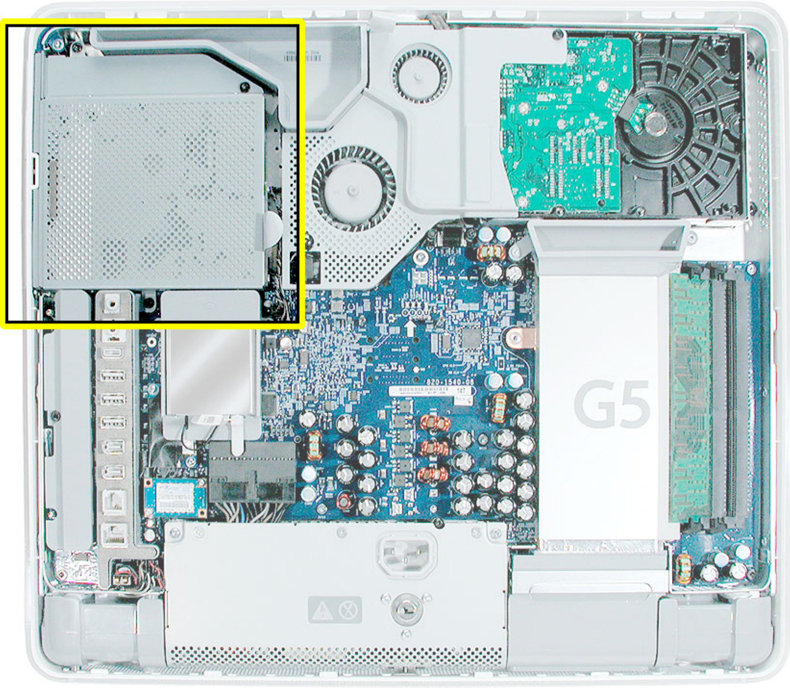
Removing the Optical Drive

1. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

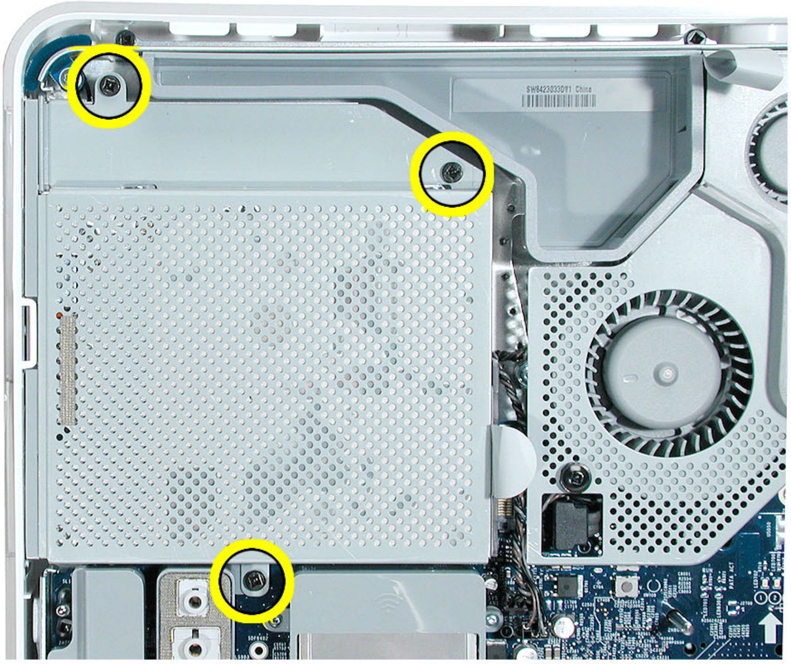
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



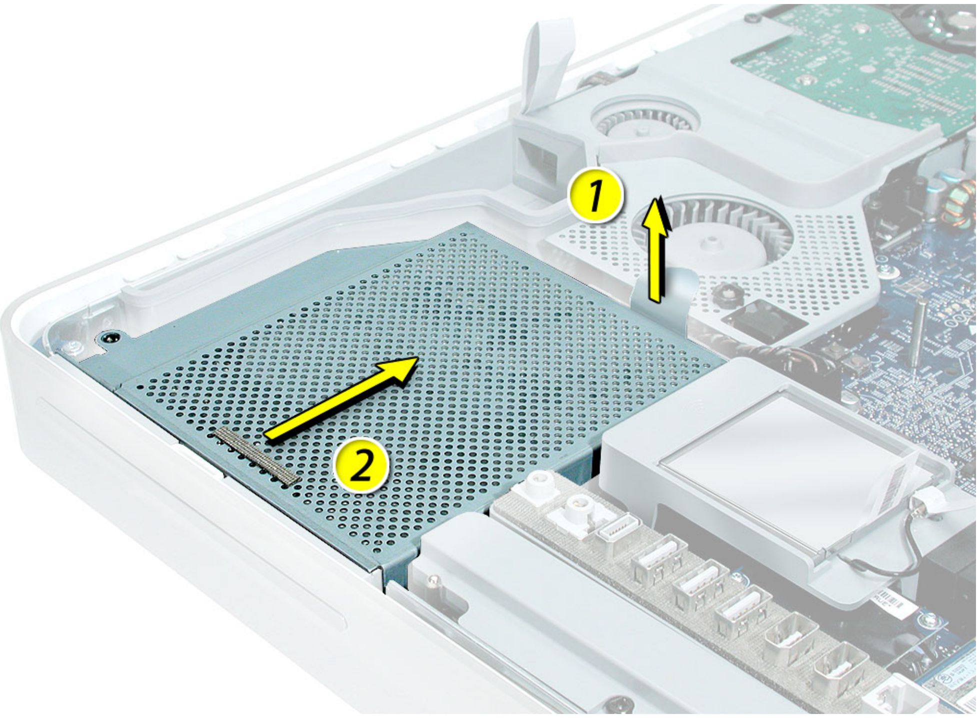
2. Locate the optical drive in the top left corner.



4. Using the tool provided, or a Phillips #1 screwdriver, remove the three optical drive screws circled below. Set the screws aside.

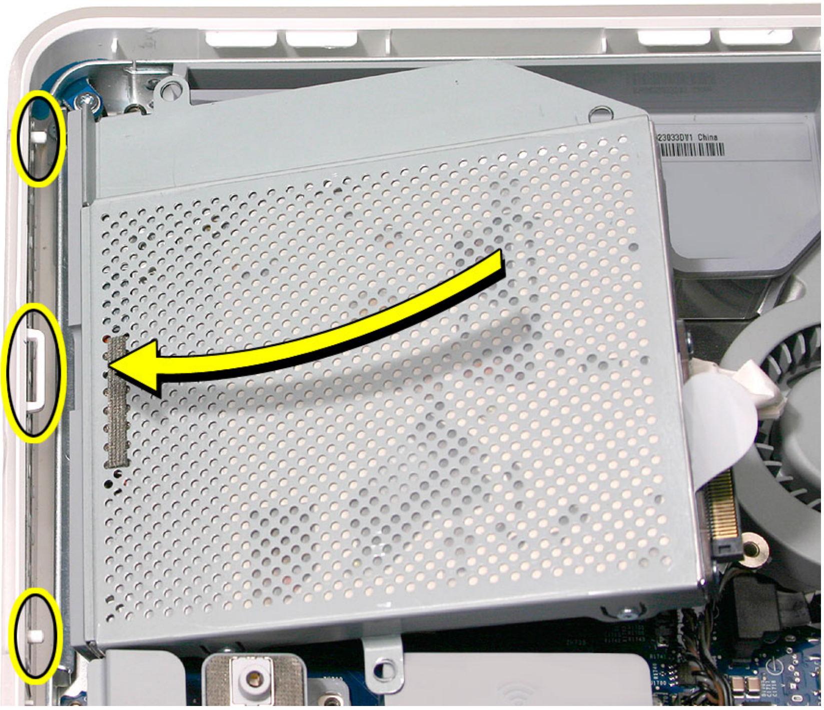


5. Pull the optical drive tab straight up and then to the right. Set the optical drive aside.

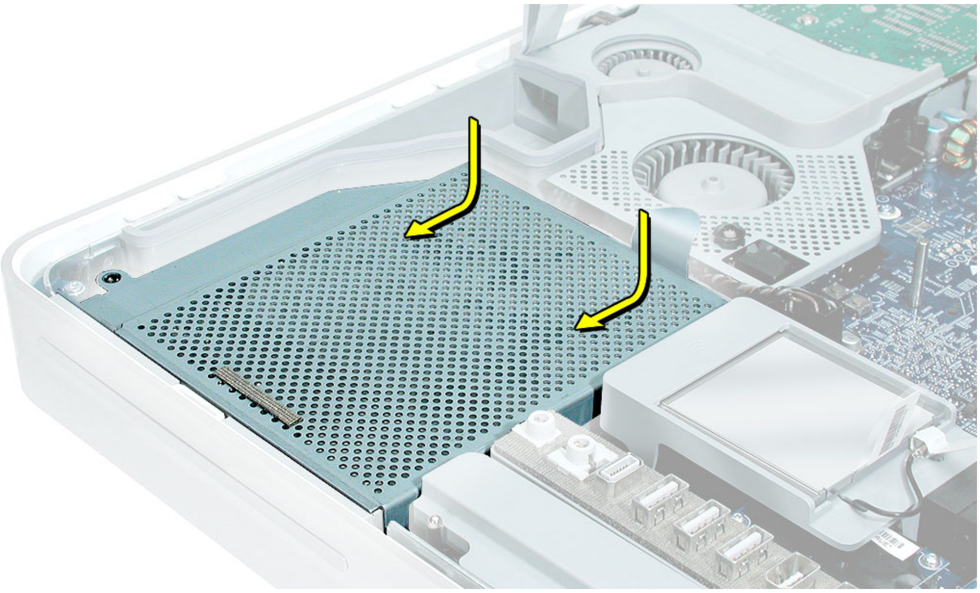


Replacing the Optical Drive

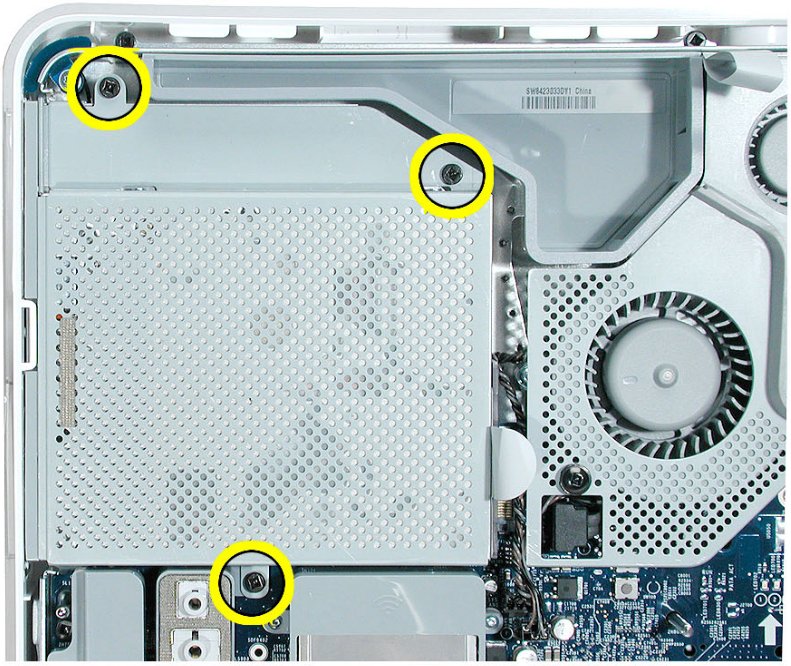
1. Remove the replacement optical drive from its packaging.
2. Holding the optical drive by the back end (near the tab), insert the drive at an angle to mate the two white pins and the plastic rectangle with the two holes and notch on the optical drive.



3. With your thumb on the tab and your index finger behind the tab, push the drive forward and down. The optical drive should click into its connector. **Note:** If the optical drive won't click into place, check that the fan cables are not obstructing the optical drive connector.



4. Replace the three optical drive screws.



Fan Cover

Tools Required

- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or equivalent to hold the screws

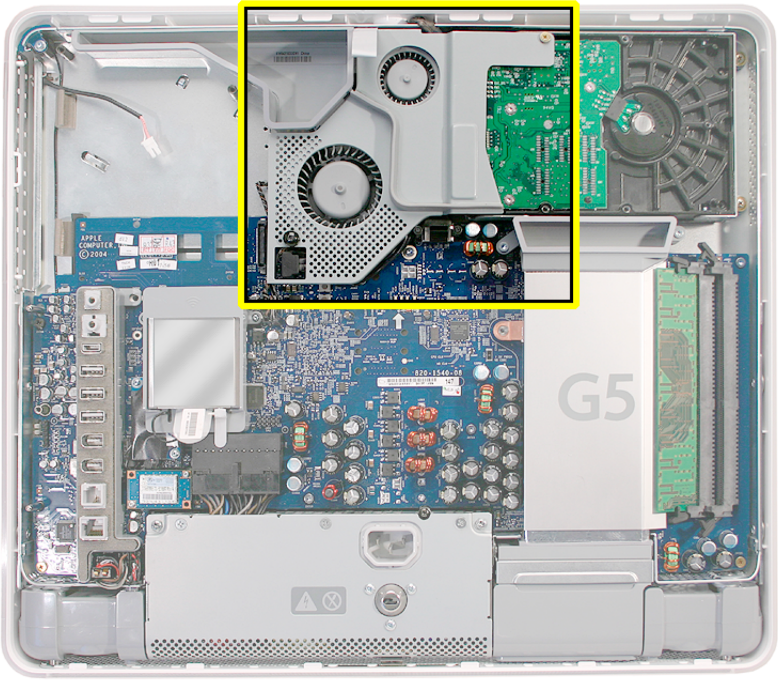
Preliminary Steps

Before you begin, remove the back cover.

Part Location

Note: This fan cover is not present on the education model.

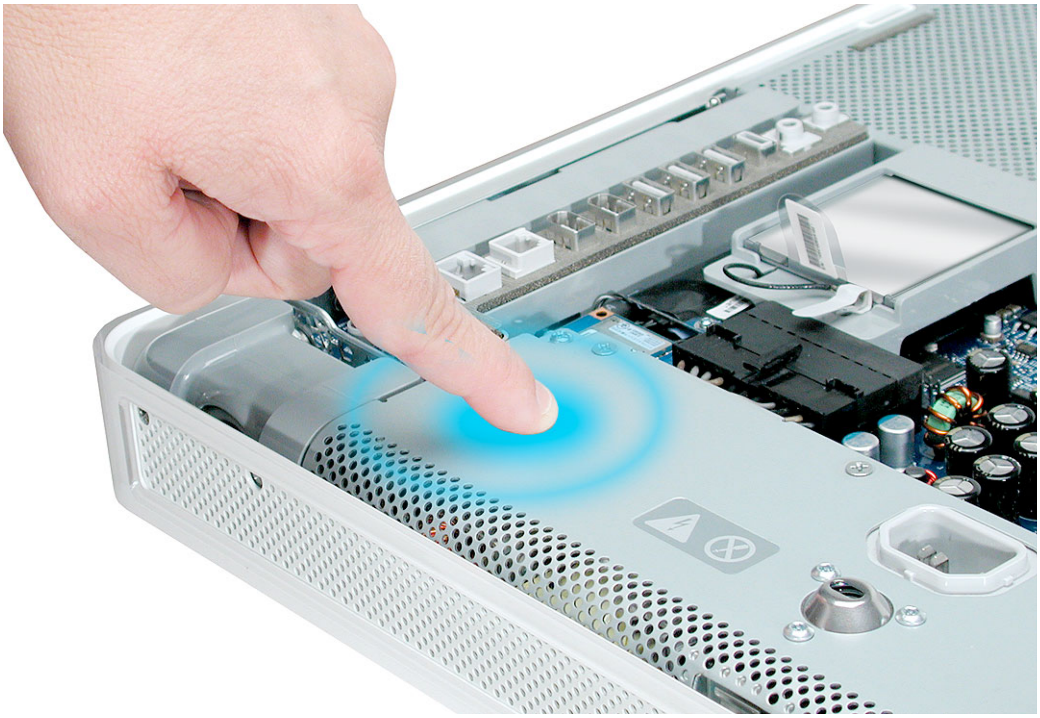
.



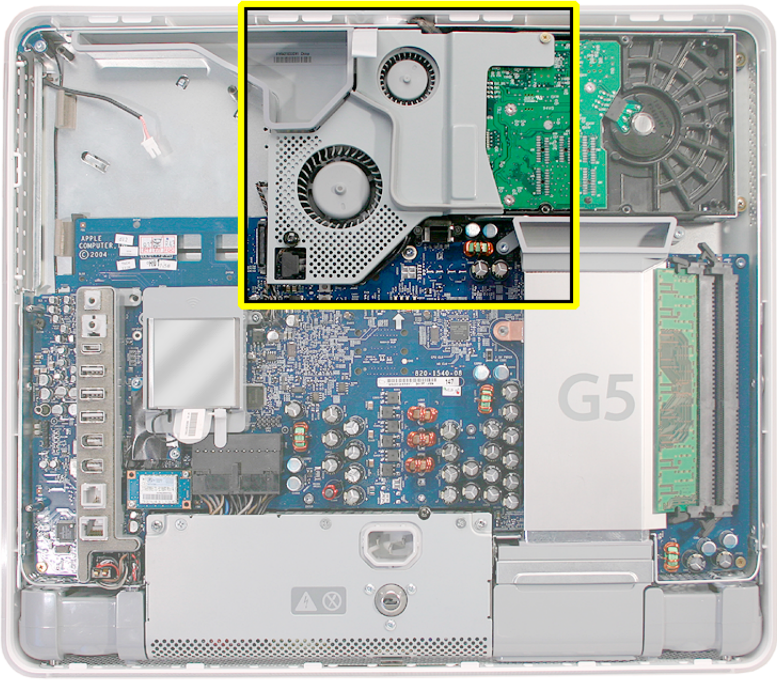
Removing the Fan Cover

1. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

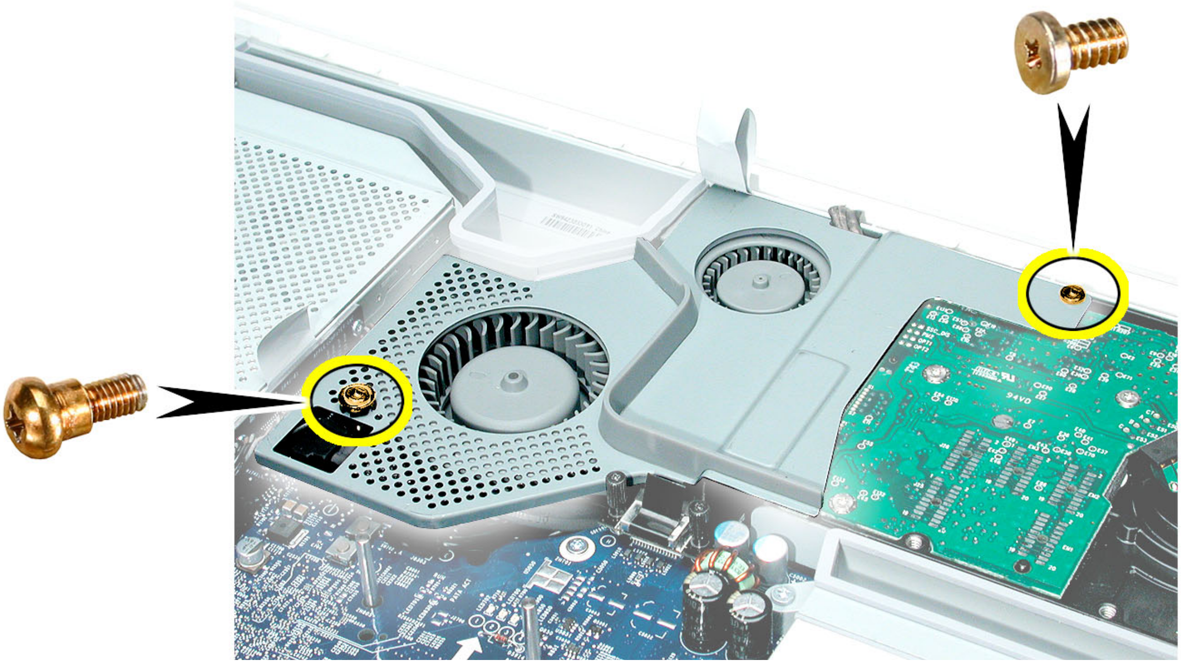
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



2. Locate the fan cover shown below.



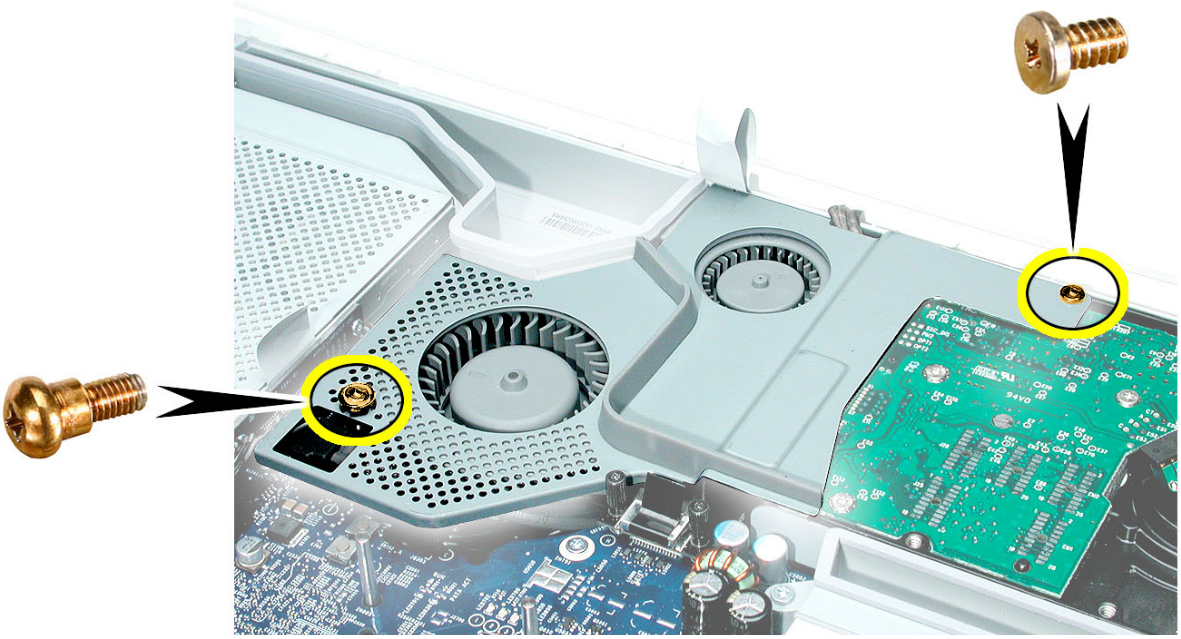
4. Using the tool provided, or a Phillips #1 screwdriver, remove the two fan cover screws. Lift the fan cover off the midplane and set the fan cover aside.



Replacing the Fan Cover

1. Remove the replacement fan cover from its packaging.

4. Replace the two fan cover screws. The larger screw attaches on the left. **Note:** Make sure the pull tab is sticking up as shown.



Inverter

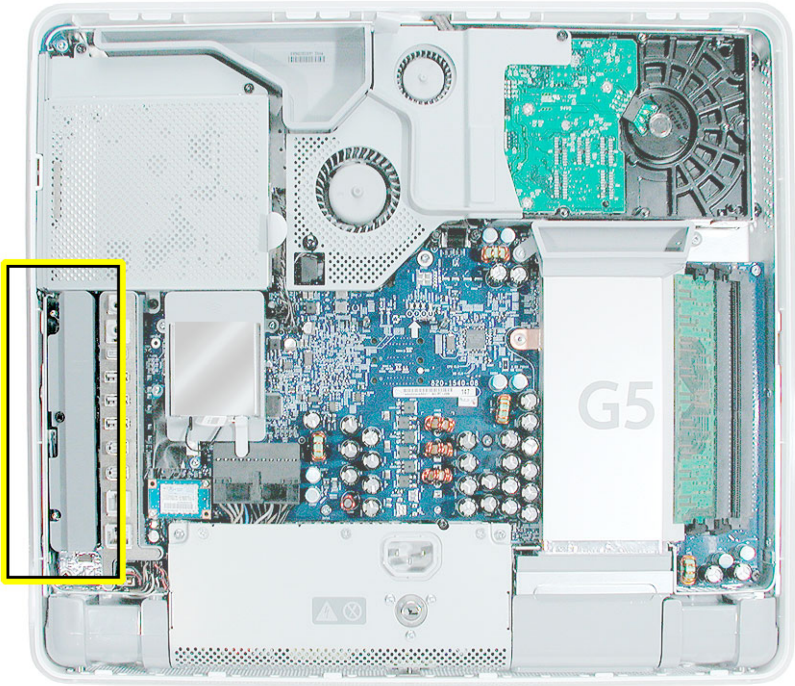
Tools Required

- Use the tool provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or something equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

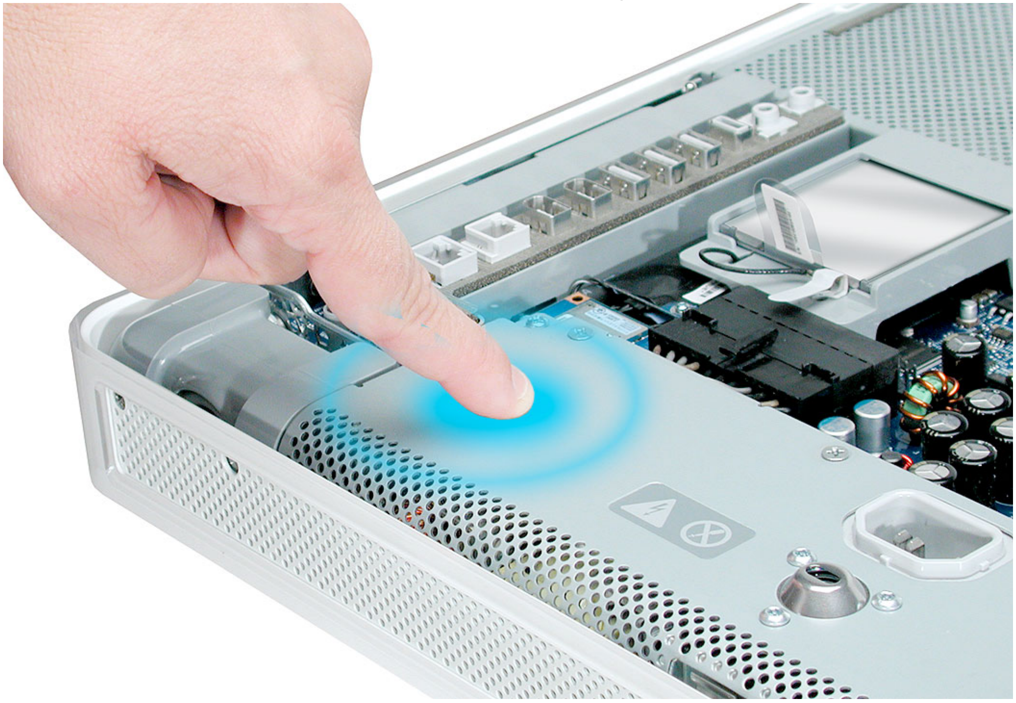
Part Location



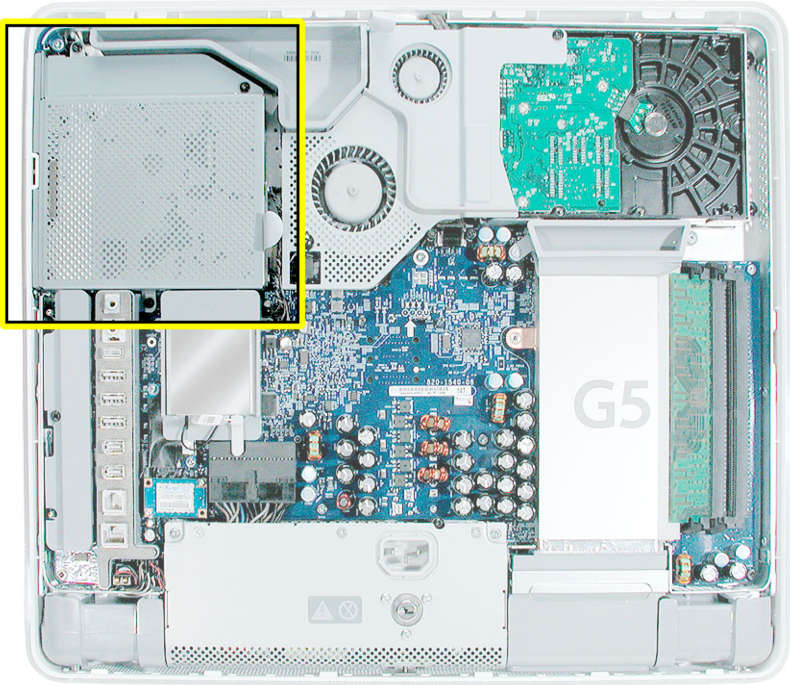
Removing the Inverter

1. To access the inverter assembly other service modules have to be removed. This procedure will show you how to remove and replace each module. As you remove each module, set it aside, along with the screws for that module.
2. **Important:** Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

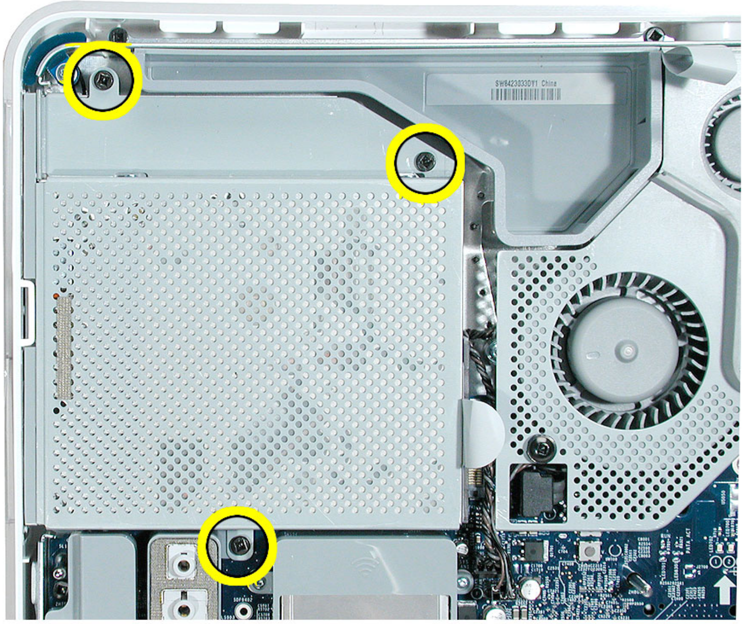
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



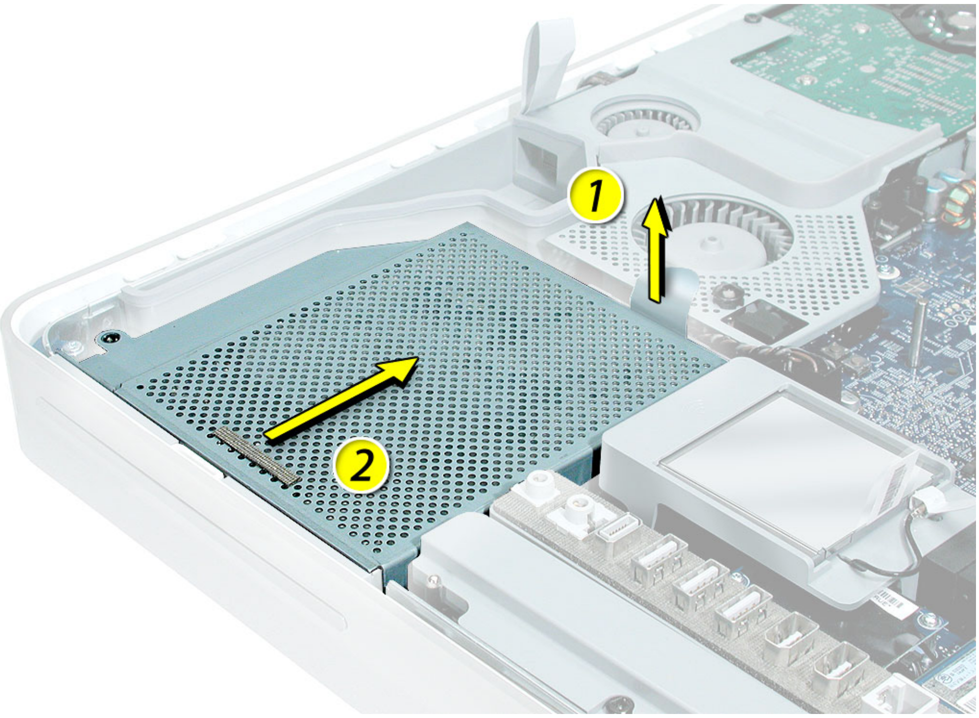
3. Locate the optical drive.



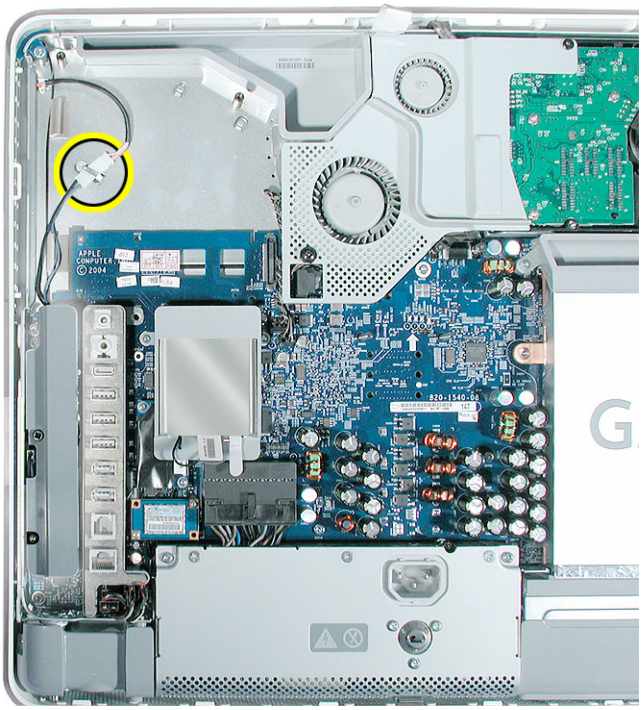
4. Using the tool provided, or a Phillips #1 screwdriver, remove the three optical drive screws.



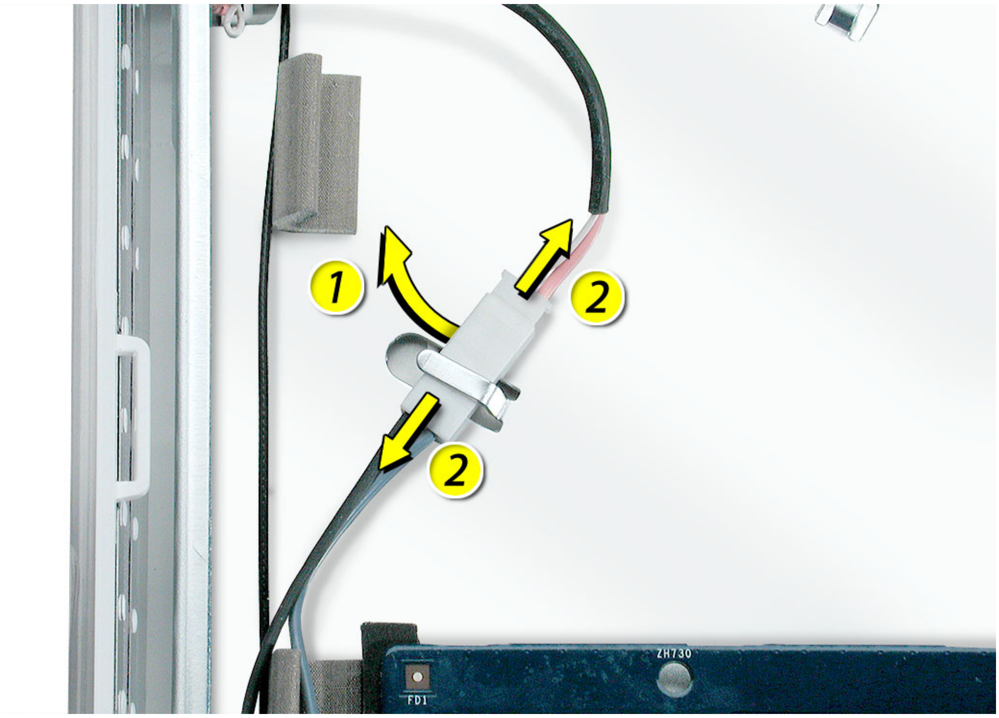
5. Pull the optical drive tab straight up and then to the right. Set the optical drive aside.



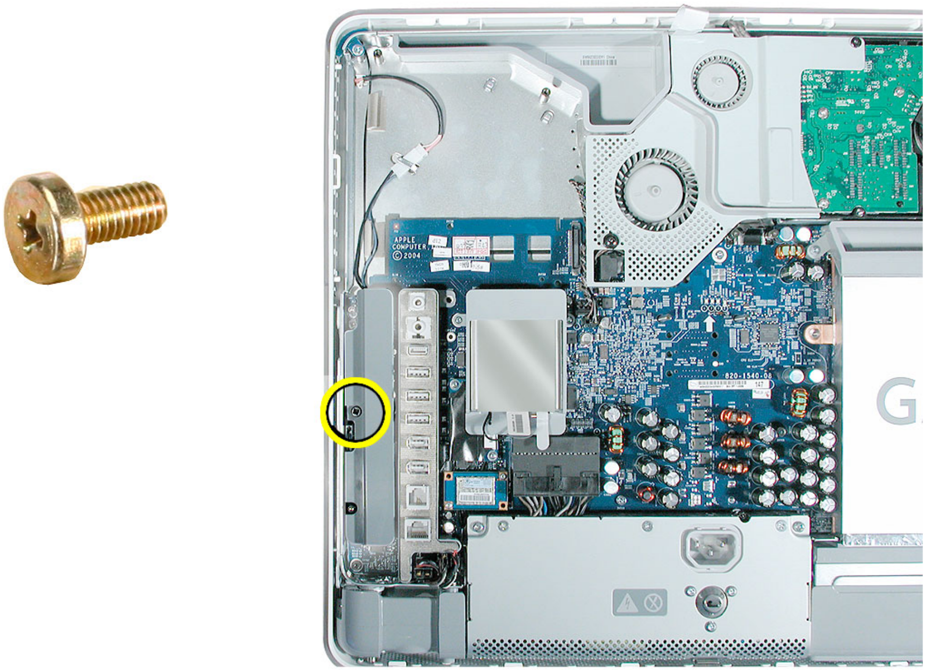
6. Locate the inverter-to-display panel cable connector.



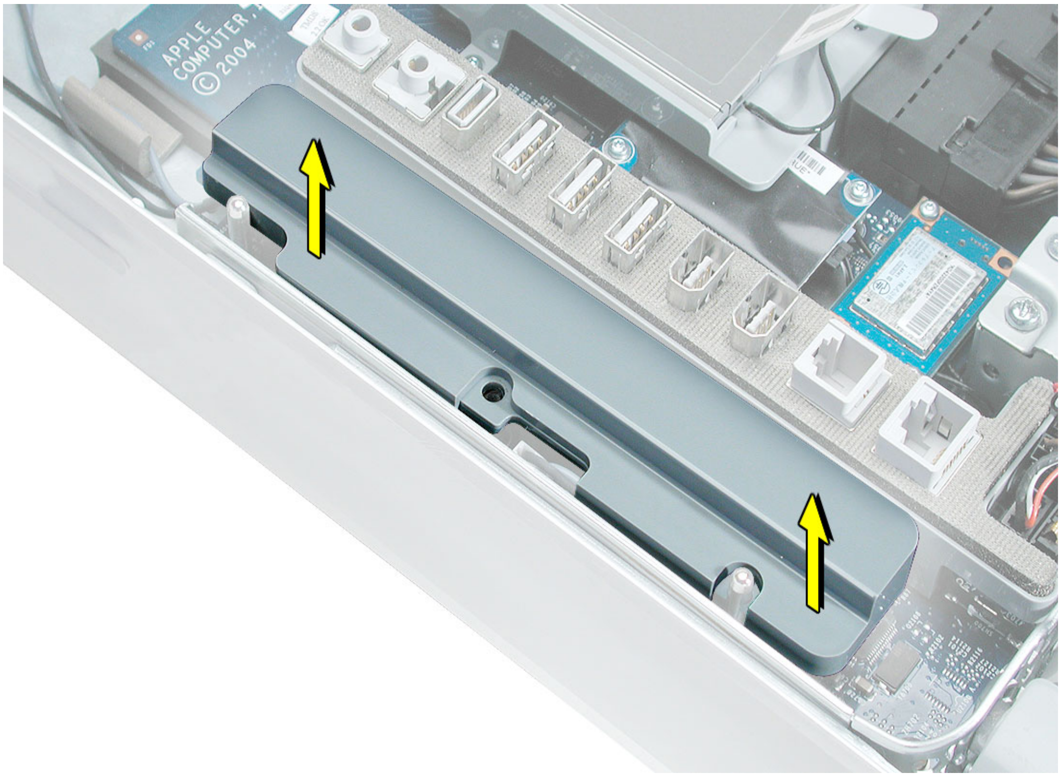
7. Release the cable from the clip. Disconnect the cable connector.


1
2
2
ZH730
FD1

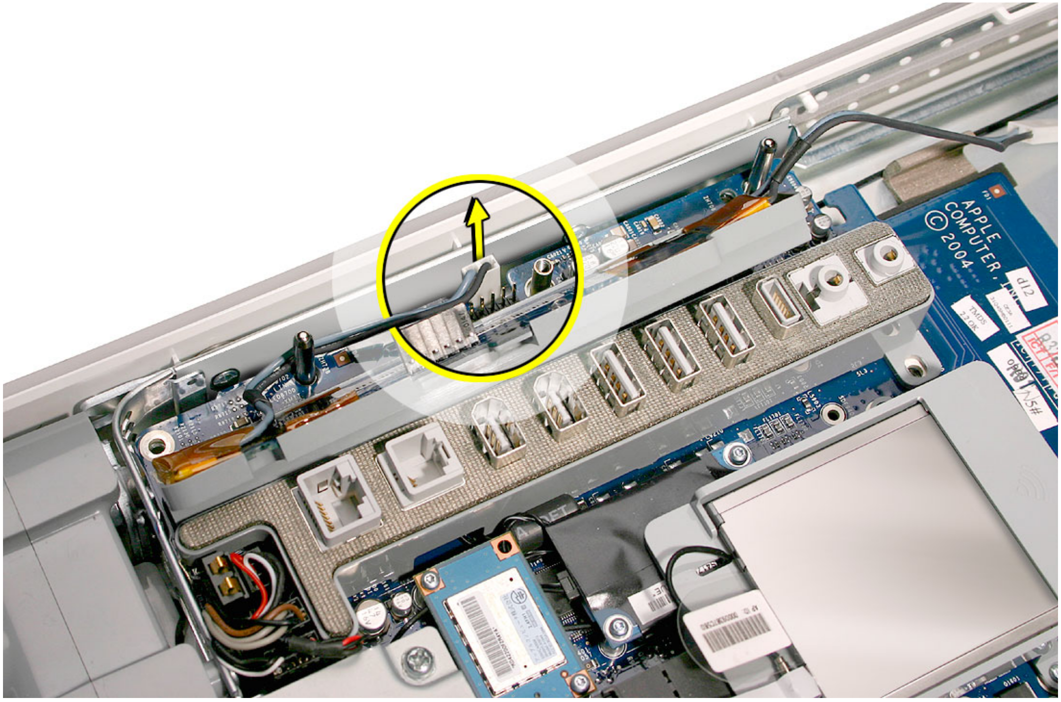
4. Using the tool provided, or a Phillips #1 screwdriver, remove the inverter screw.


APPLE COMPUTER © 2004
820-1540-0

5. Lift the inverter straight up to disconnect the inverter board.

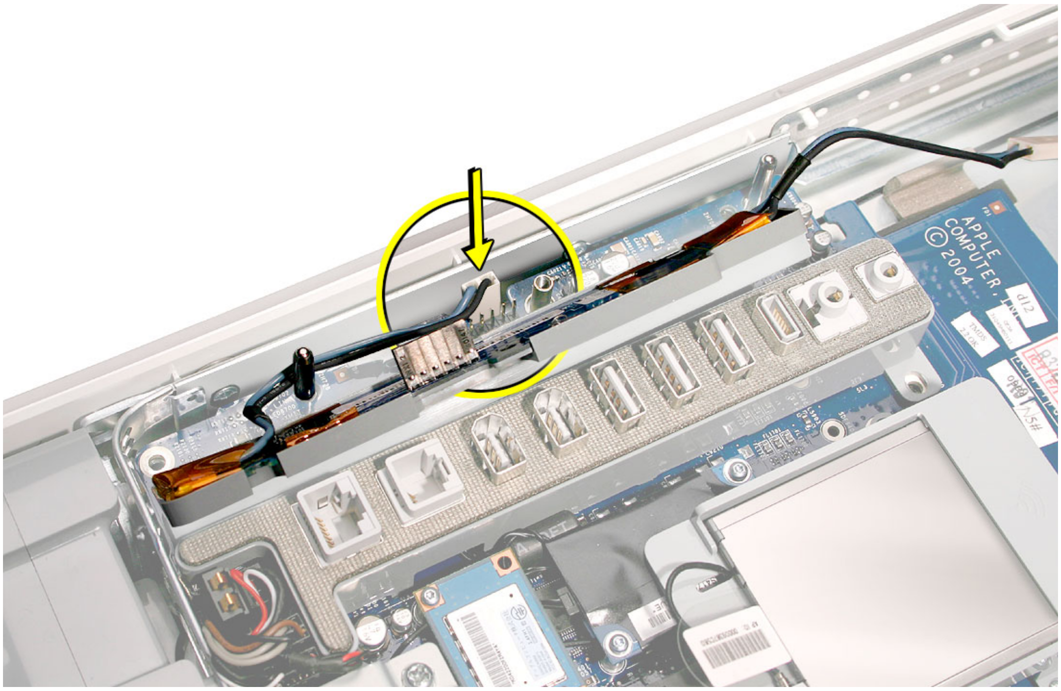


6. Disconnect the white connector (circled below) by pulling it straight up. Be careful not to prick your fingers on the pins next to the white connector **Important:** Return the inverter to Apple in the packaging provided.

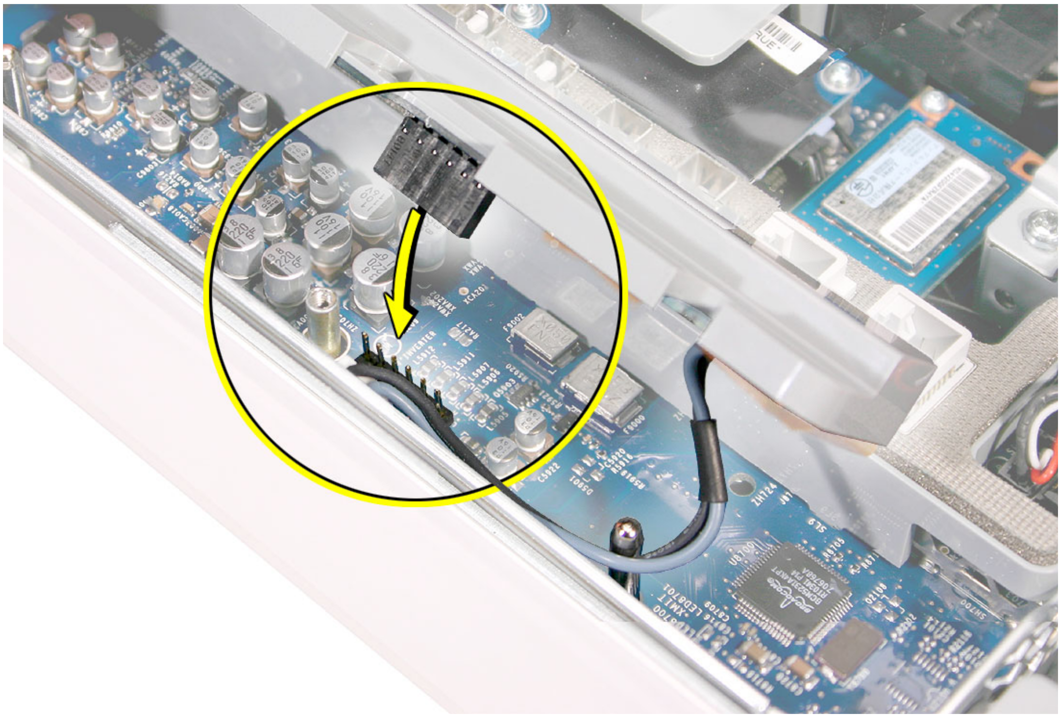


Replacing the Inverter

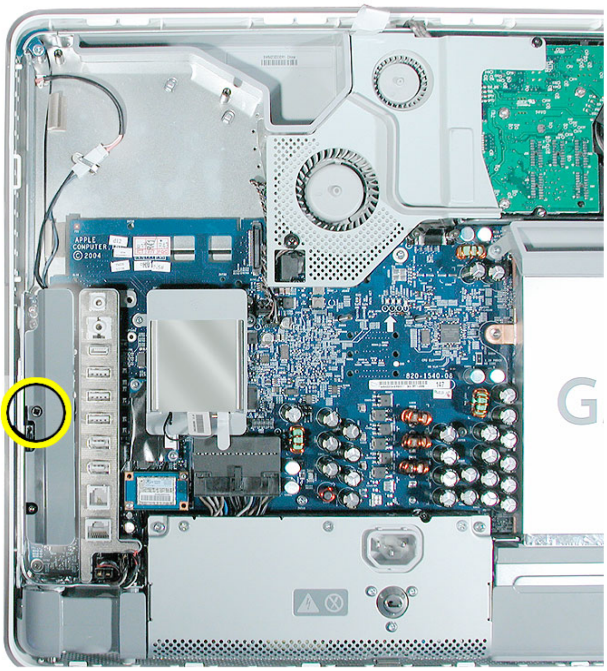
1. Remove the replacement inverter from its packaging.
2. Connect the white connector on the inverter board to the main board. Route this cable around the silver post (as shown). **Caution:** Be careful not to bend the pins or prick your fingers on the pins located next to the white connector.



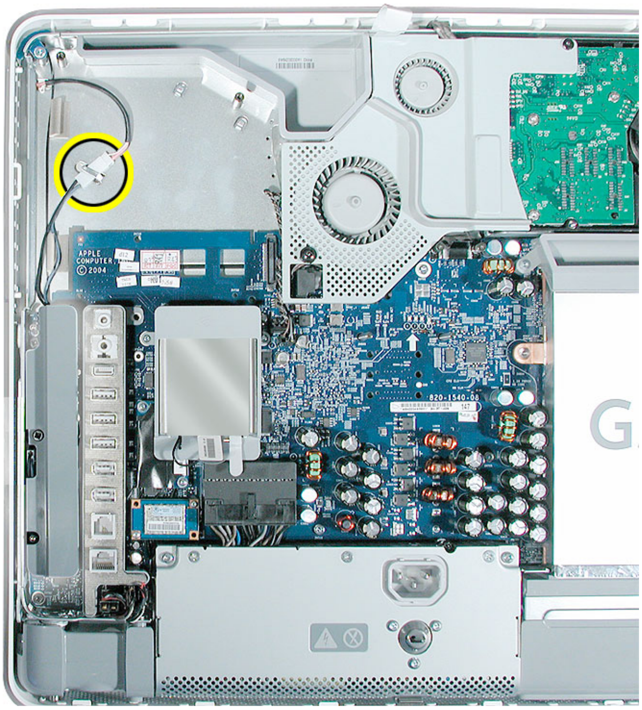
3. As you lower the inverter into place, connect the black connector to the pins on the board. Use the tall silver pins as a guide to align the inverter. **Important:** Make sure the connector mates with the pins. Double check that it’s connected.



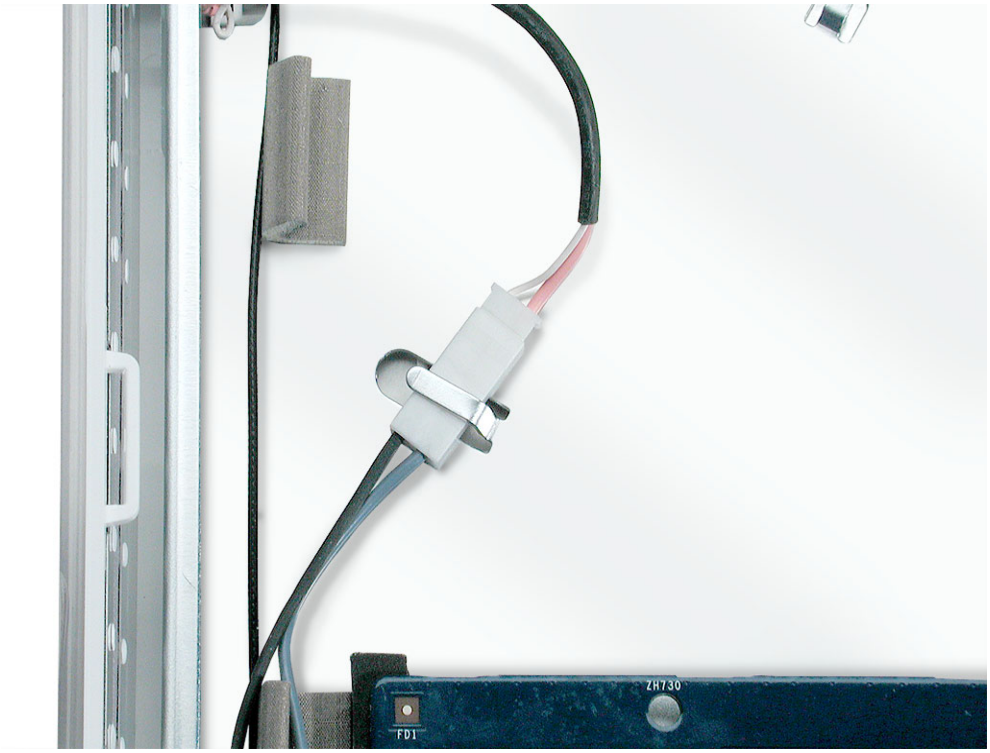
4. Replace the inverter screw.



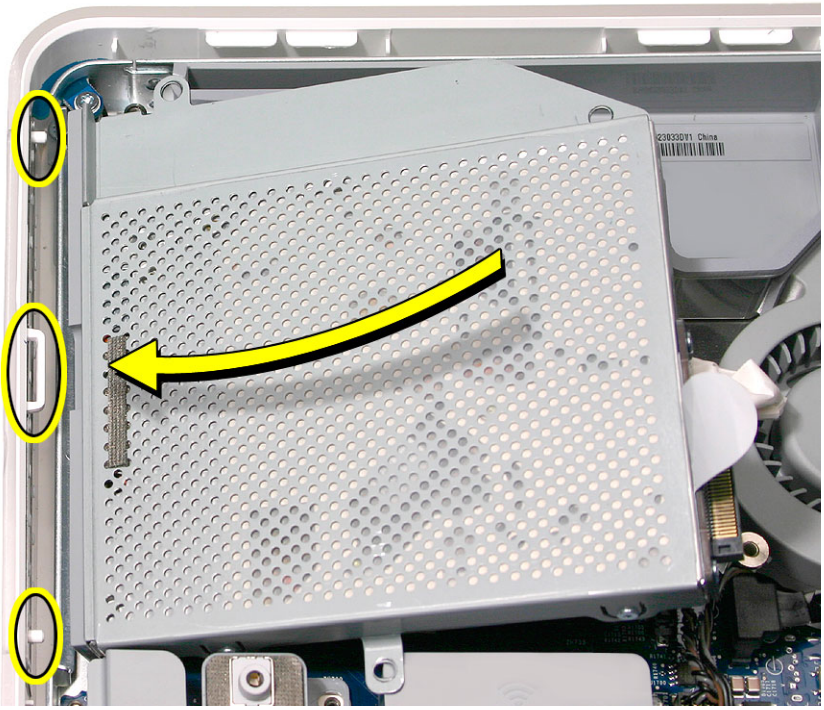
4. Reconnect the inverter-to-display panel cable. **Important:** The connector is keyed (it fits together only one way)


APPLE COMPUTER © 2004
820-1540-08

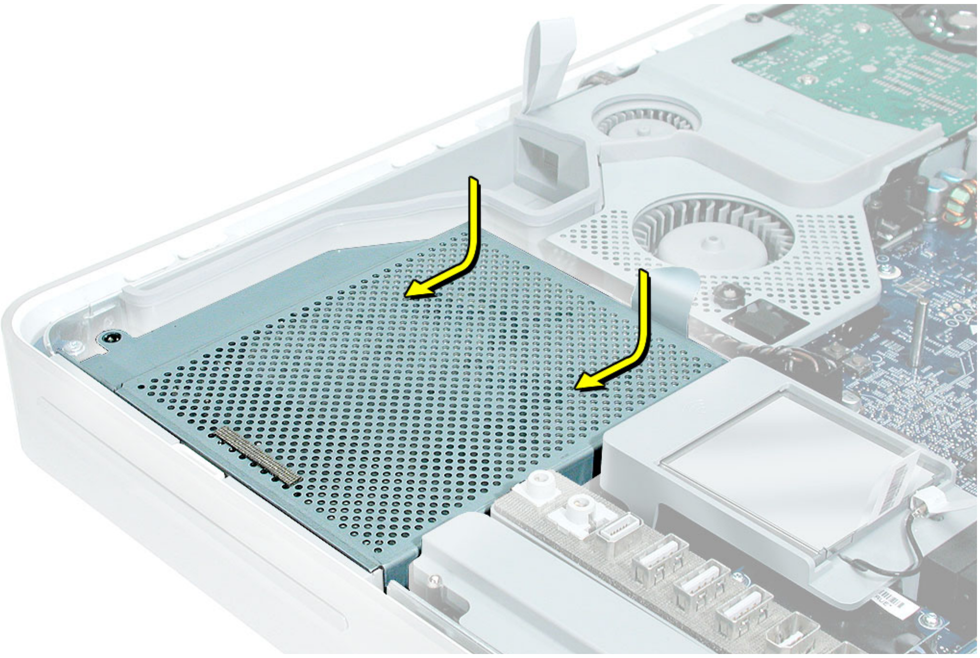
5. Secure the connector under the metal tab.



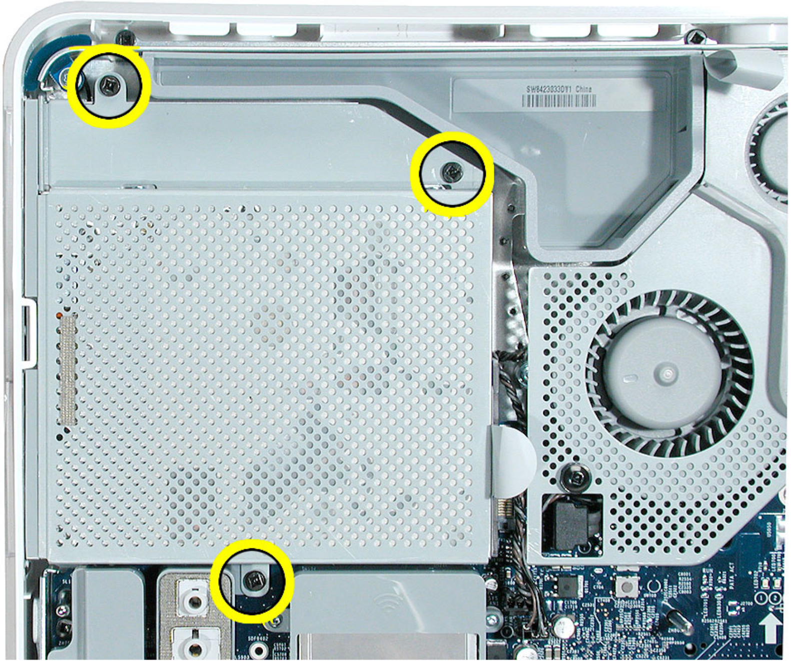
6. Locate the optical drive that you set aside. Holding the optical drive by the back end (near the tab), insert the drive at an angle to mate the two white pins and the plastic rectangle with the two holes and notch on the optical drive.



7. With your thumb on the tab and your index finger behind the tab, push the drive forward and down. The optical drive should click into its connector. **Note:** If the optical drive won't click into place, check that the fan cables are not obstructing the optical drive connector.



4. Replace the optical drive screws.



Memory (DIMMs)

About iMac G5 Memory

- iMac G5 computers work with memory modules (DIMMs) that meet all of these criteria: PC3200, 2.5V, unbuffered, 8-byte, nonparity, 184-pin, 400Mhz DDR SDRAM.
- There are two RAM slots. The maximum amount of RAM you can install is 2 GB. You can use RAM module sizes of 256 MB, 512 MB and 1 GB, in either slot.
- DIMMs with any of the following features are not supported in the iMac G5 computer: registers or buffers, PLLs, ECC, parity, or EDO RAM

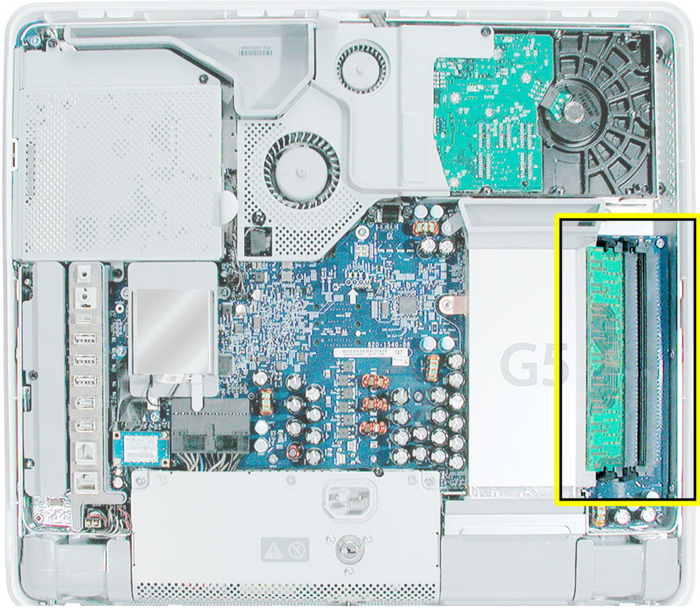
Tools

Use the screwdriver provided, or a Phillips #1 screwdriver to open the back co

Preliminary Steps

Before you begin, remove the back cover.

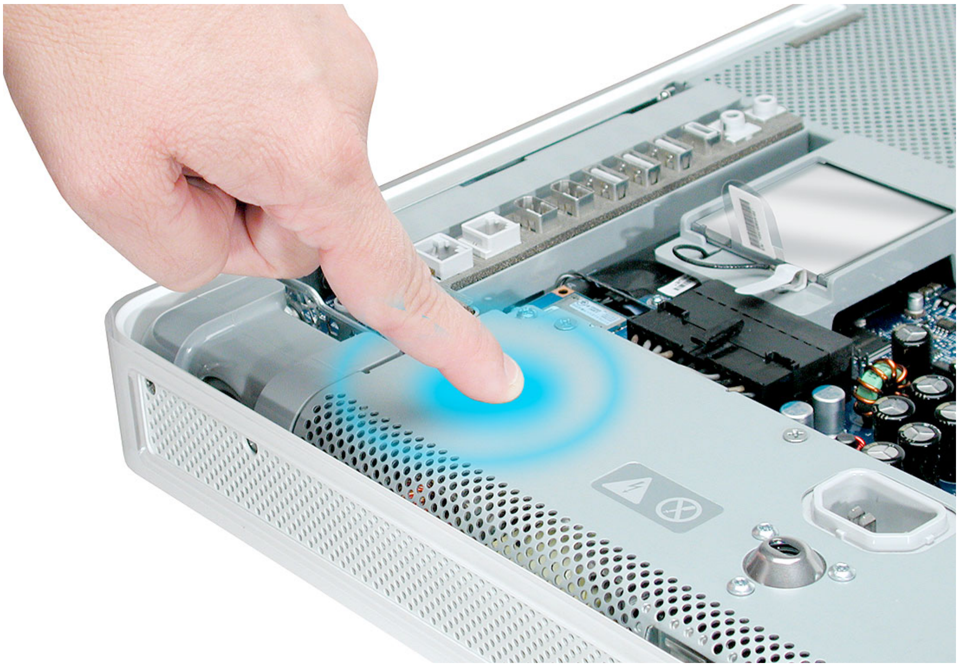
Part Location



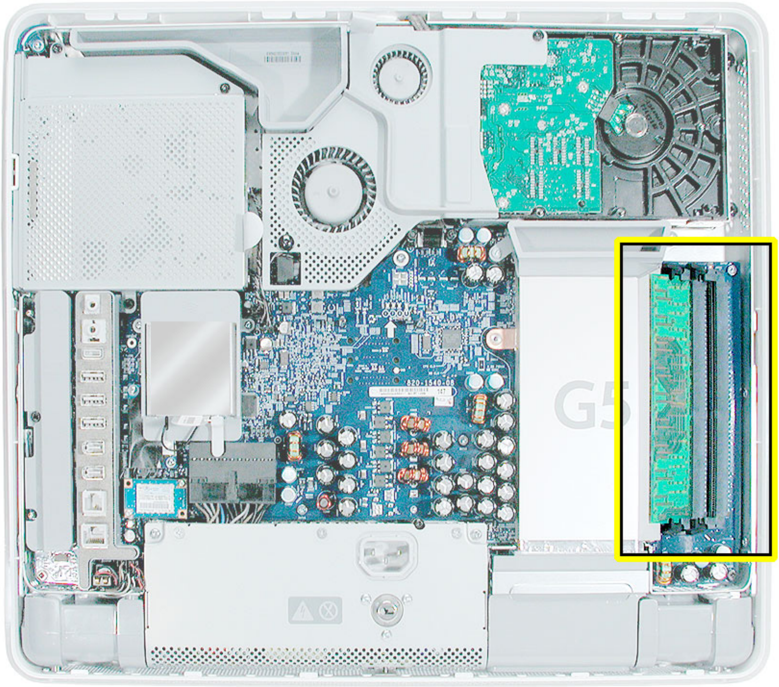
Removing the Memory

1. **Important:** Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

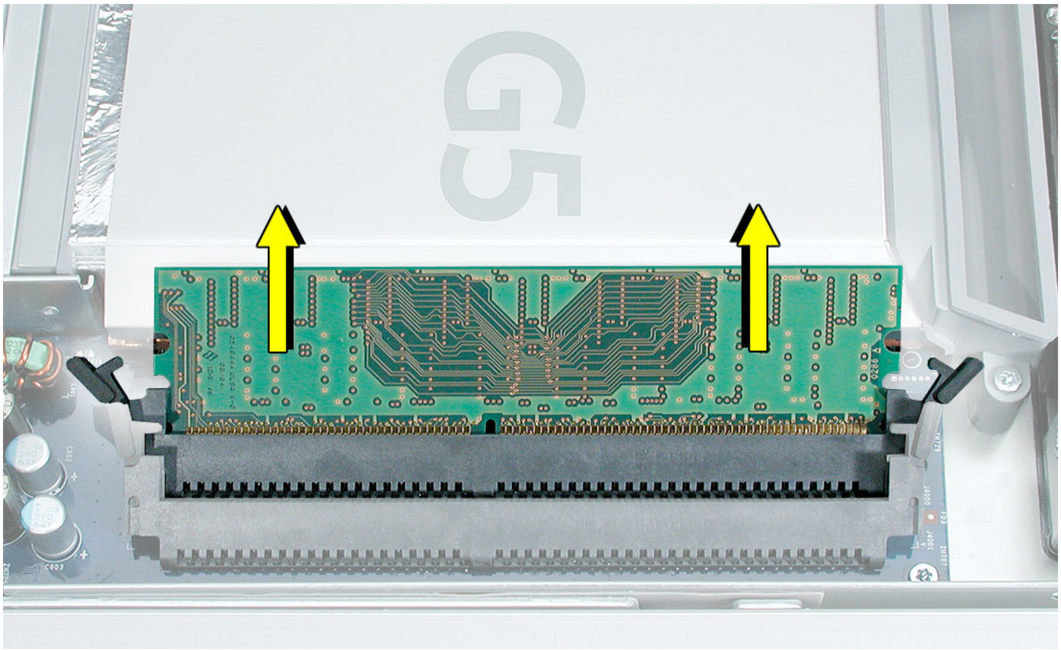
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



2. Locate the memory module(s) in the bottom right corner.

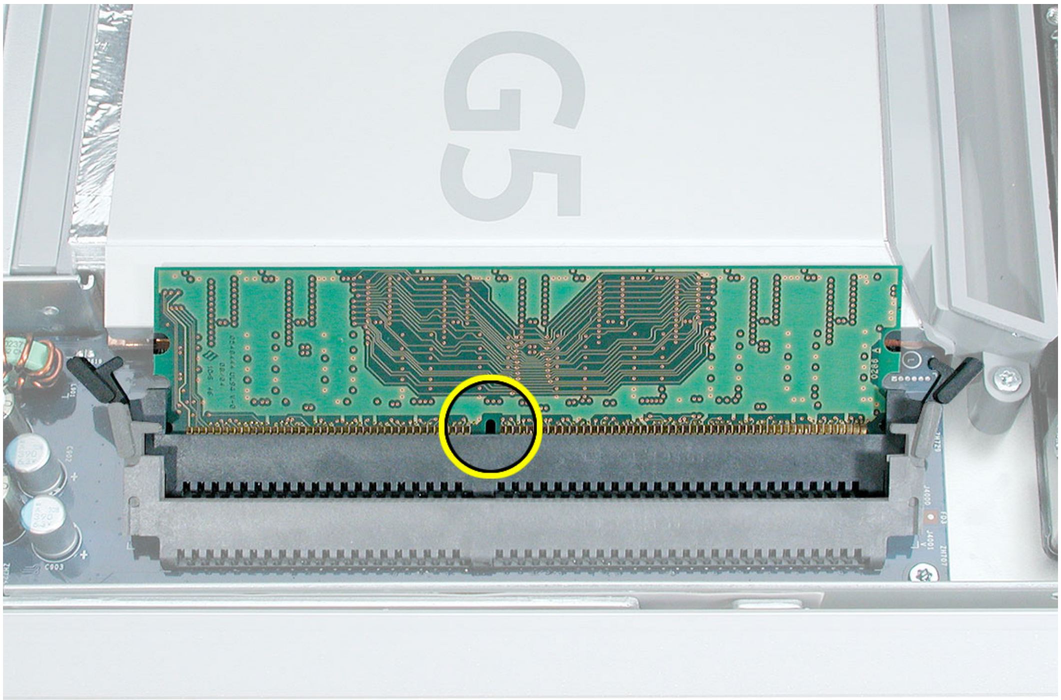


3. Rotate the computer counterclockwise so the memory is in the position shown below.
4. To release the memory from its slot, push down on the two side latches. Then pull the memory module out of the slot. Repeat this step if you have a second memory module. **Important:** Return the memory to Apple in the packaging provided.

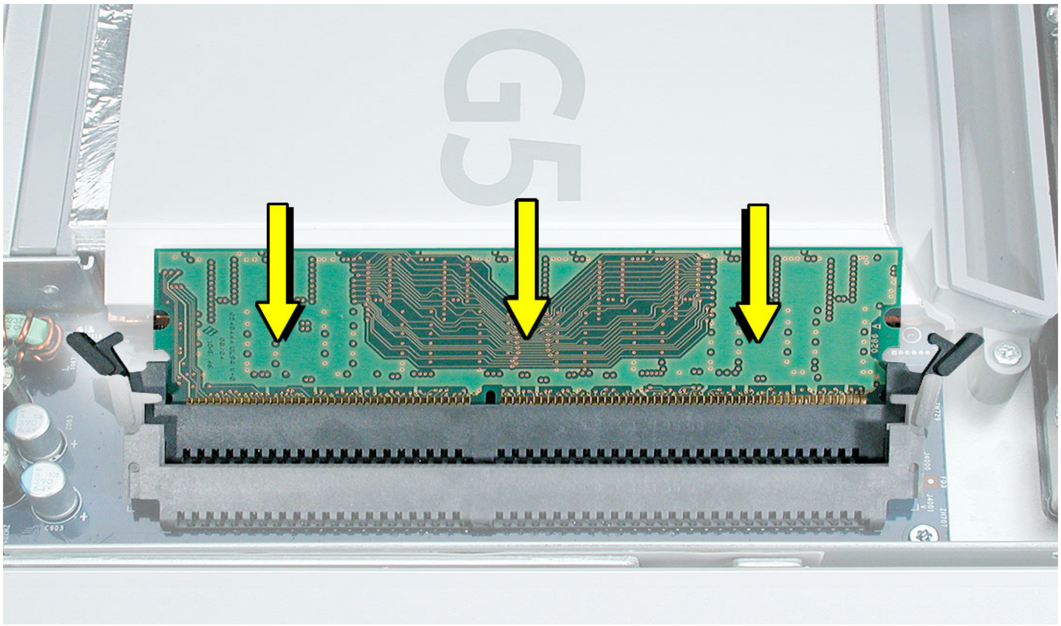


Replacing the Memory

1. Remove the replacement memory module from its packaging.
2. Replace the memory module(s) by lining up the notch on the module with the notch on the slot.



3. Press firmly on the memory module until it clicks into place. Use your thumb and index finger to push the module into the slot.



Power Supply

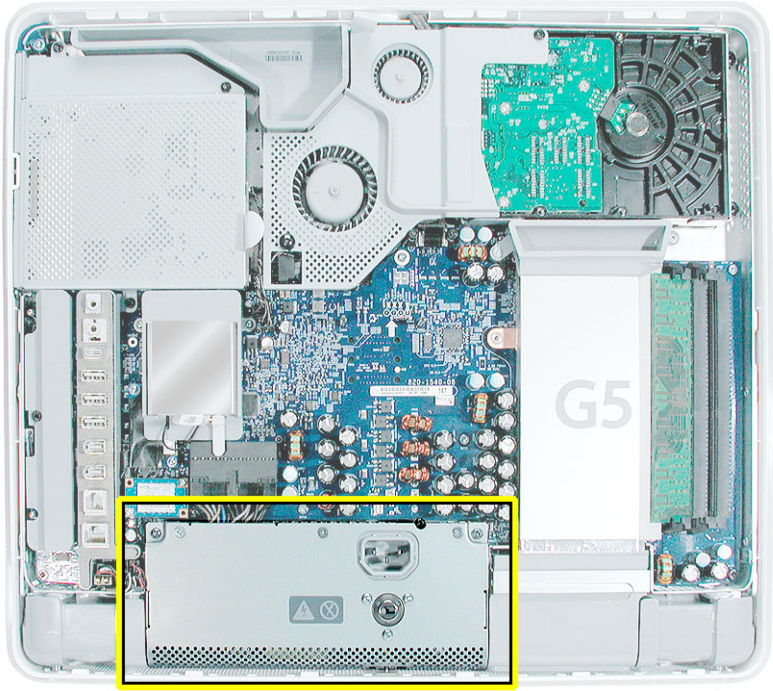
Tools Required

- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Flat blade screwdriver
- Screw tray or equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

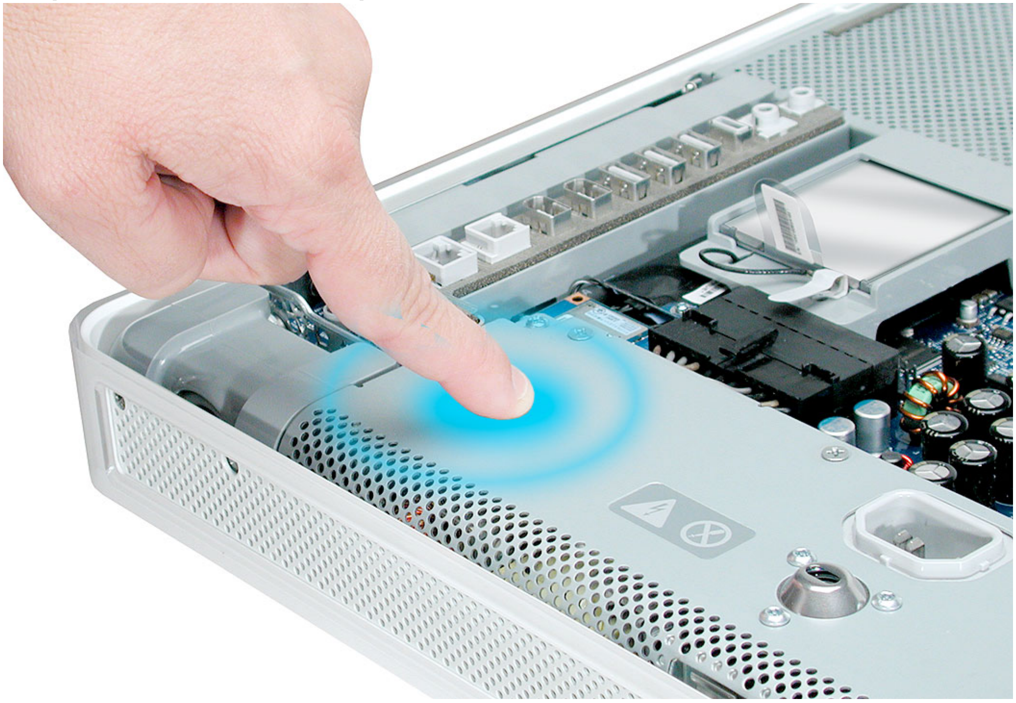
Part Location



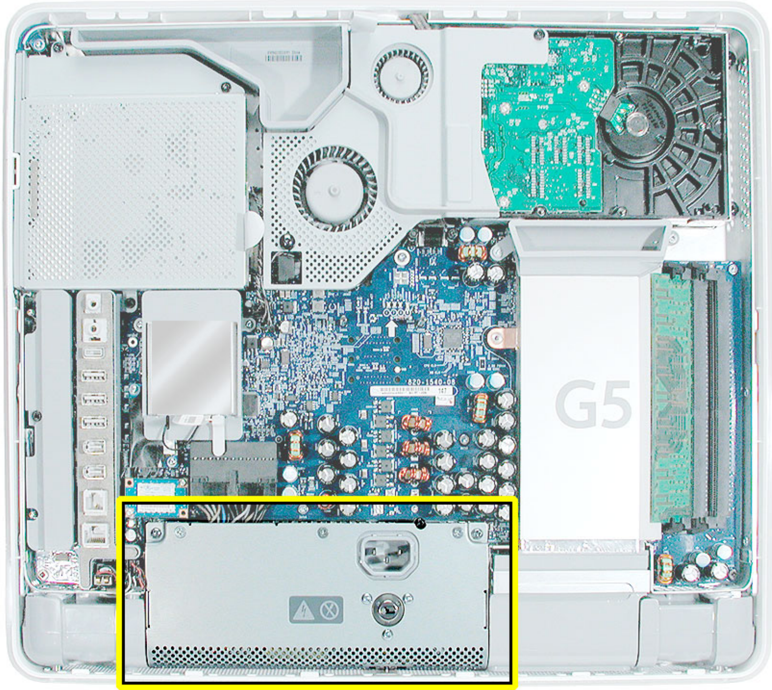
Removing the Power Supply

1. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

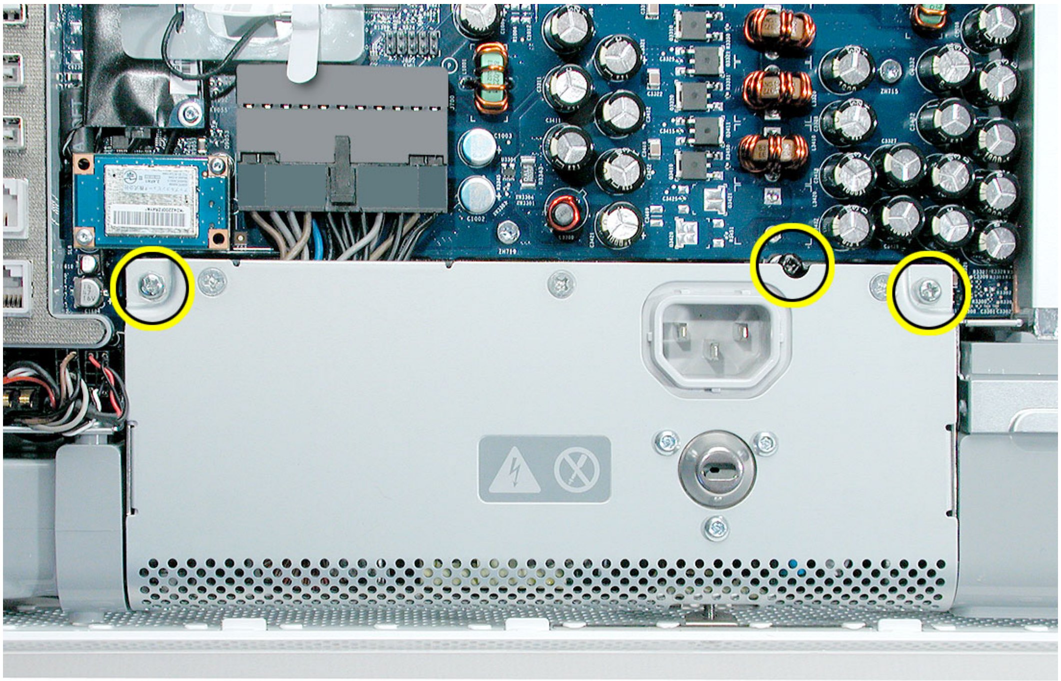
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



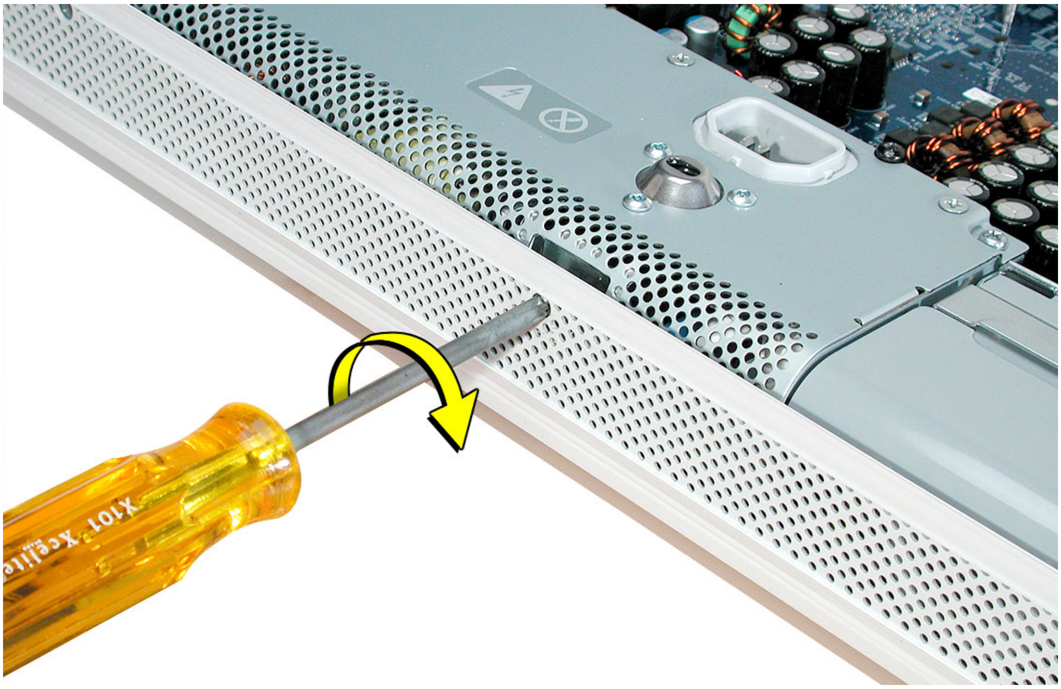
2. Locate the power supply in the picture below.



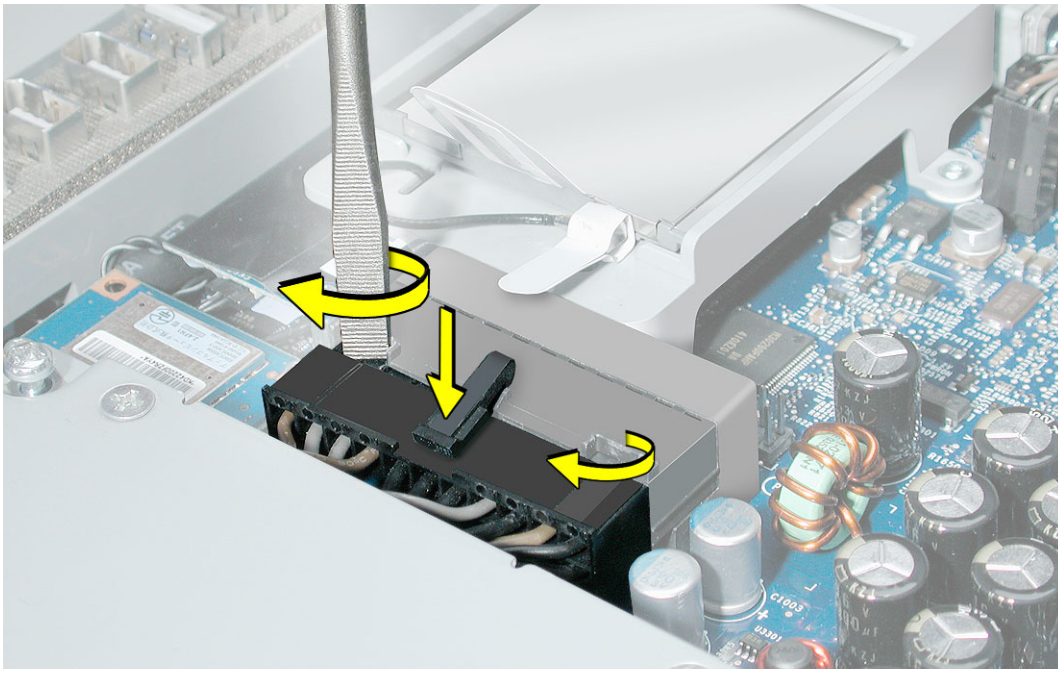
3. Loosen the three captive power supply screws (circled below) by turning them counterclockwise. The screws are captive; they will not come out of the power supply.



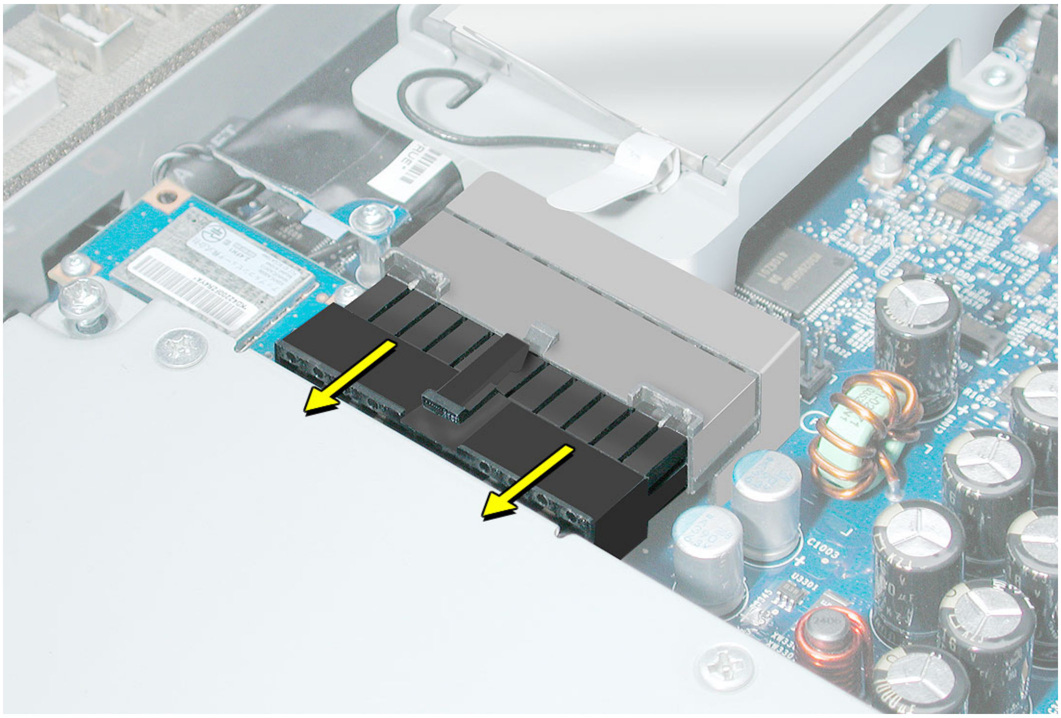
4. Turn the middle case screw clockwise about five revolutions. This releases a screw clamp that holds the power supply in the display/bezel assembly.



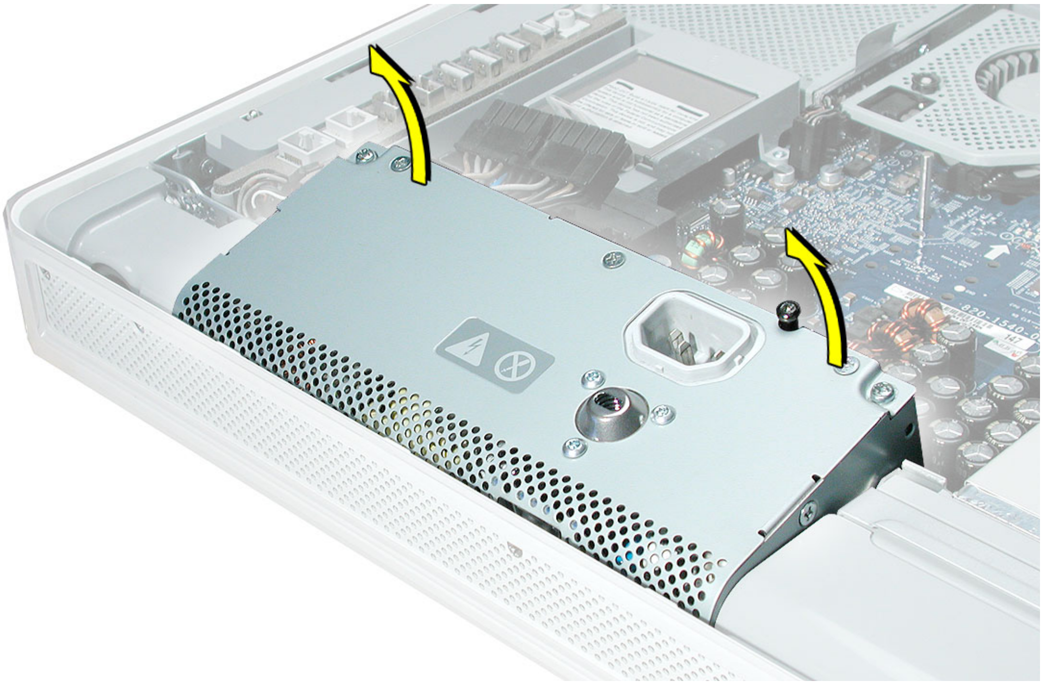
5. Disconnect the power supply cable by pressing the connector release tab and using a wide, flat blade screwdriver to pry apart the connector.



6. Pull the power supply cable out of the connector.



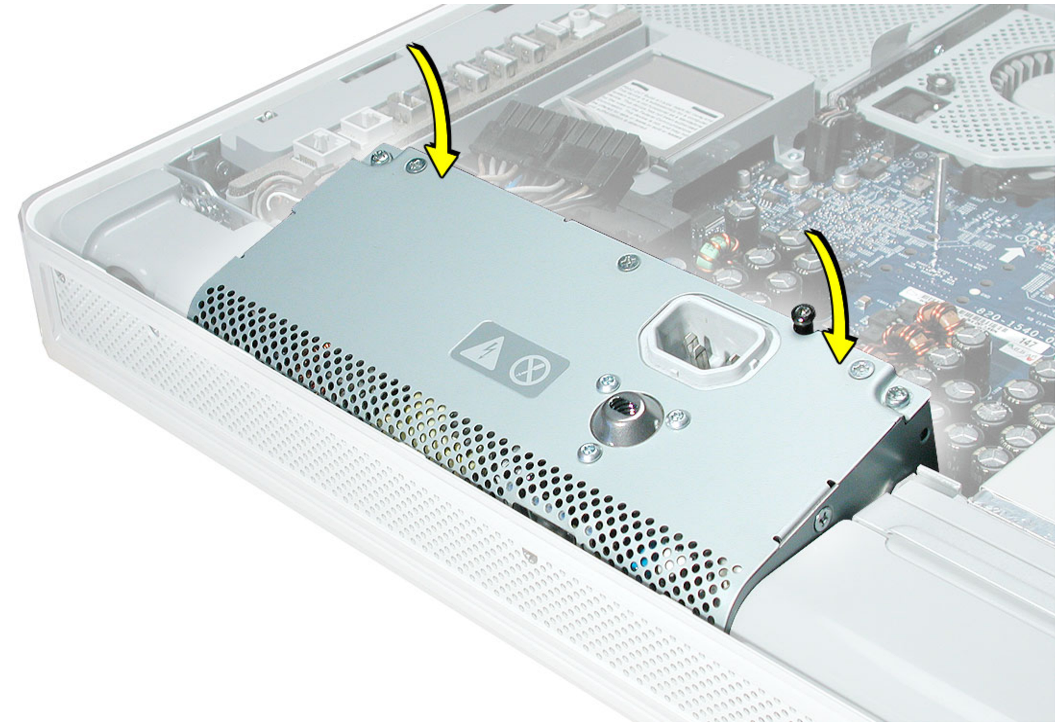
7. Tilt up the power supply until it clears the edge of the main circuit board. Lift it out of the computer and set it aside.



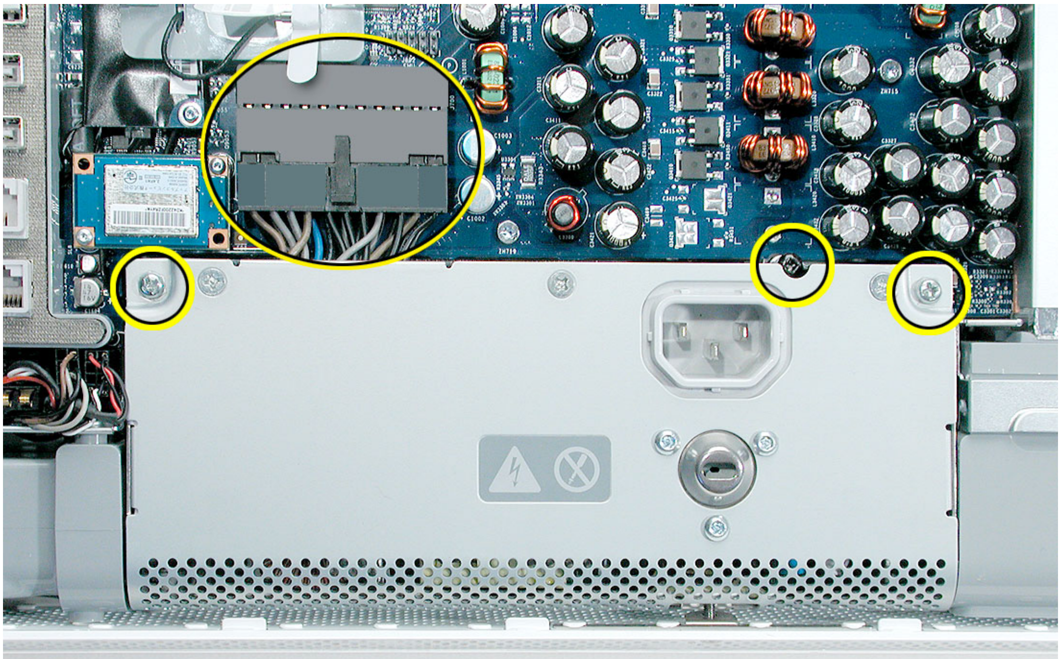
8. Return this power supply to Apple in the packaging provided.

Replacing Power Supply

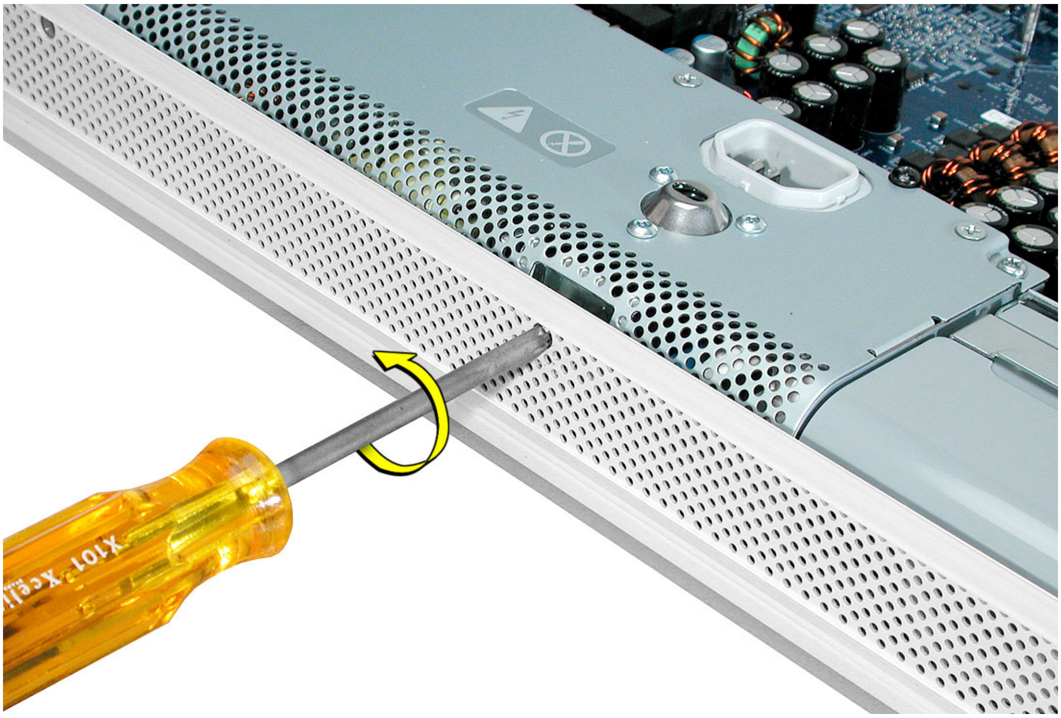
1. Remove the replacement power supply from its packaging.
2. Lower the power supply into the computer.



3. Connect the black power supply connector and tighten the three captive screws, turning them clockwise.



4. Turn the middle case screw counterclockwise about five revolutions. This step prepares the back cover to be installed and secured.



Replacement Note: Align the card's connector with the expansion slot and press until the connector is inserted all the way into the slot. If you're installing a 12-inch card, make sure the card engages the appropriate slot in the PCI card guide.

- Don't rock the card from side to side; instead, press the card straight into the slot.
- Don't force the card. If you meet a lot of resistance, pull the card out. Check the connector and the slot for damage or obstructions, then try inserting the card again.
- Pull the card gently to see if it is properly connected. If it resists and stays in place, and if its gold connectors are barely visible, the card is connected.

AirPort Extreme Card

Only the AirPort Extreme Card may be installed in the iMac G5. Older AirPort Cards do not work in this computer.

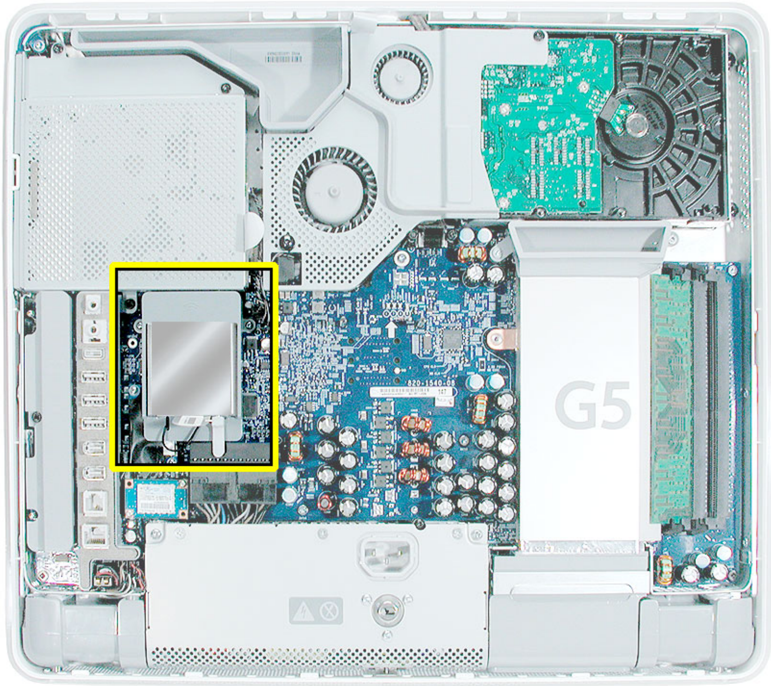
Tools

No tools are required for this procedure.

Preliminary Steps

Before you begin, remove the back cover.

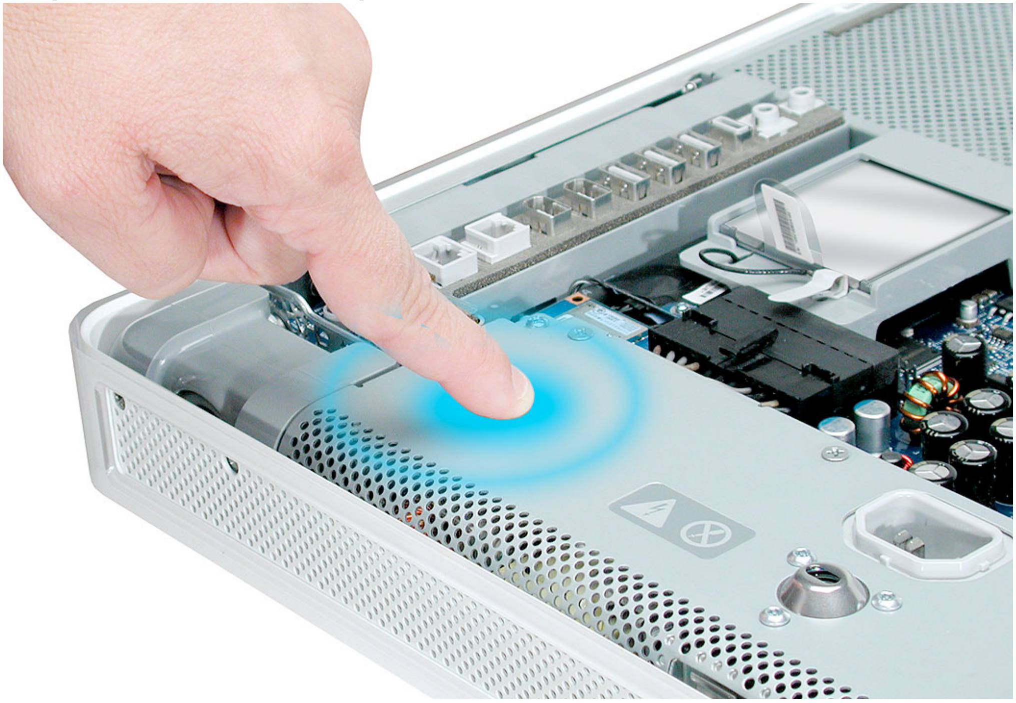
Part Location



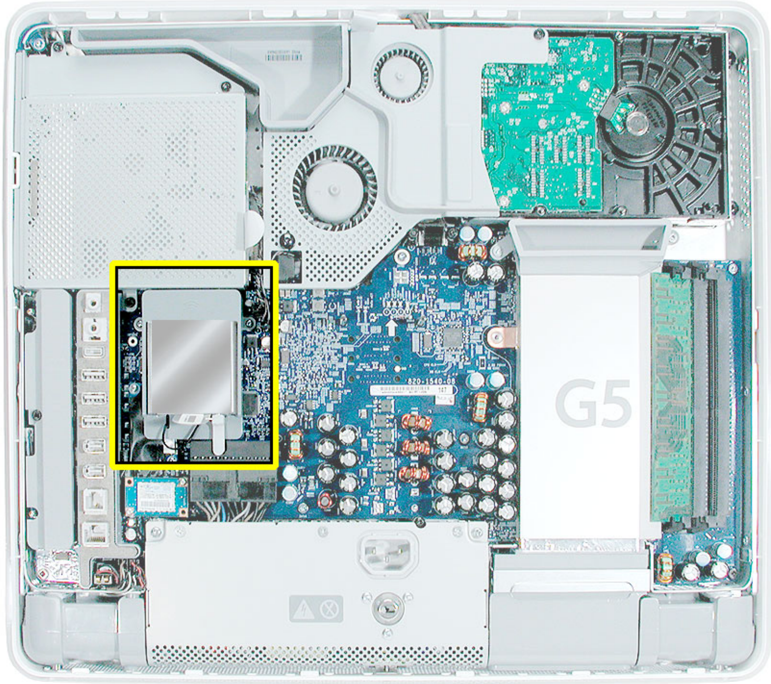
Removing the AirPort Extreme Card

1. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

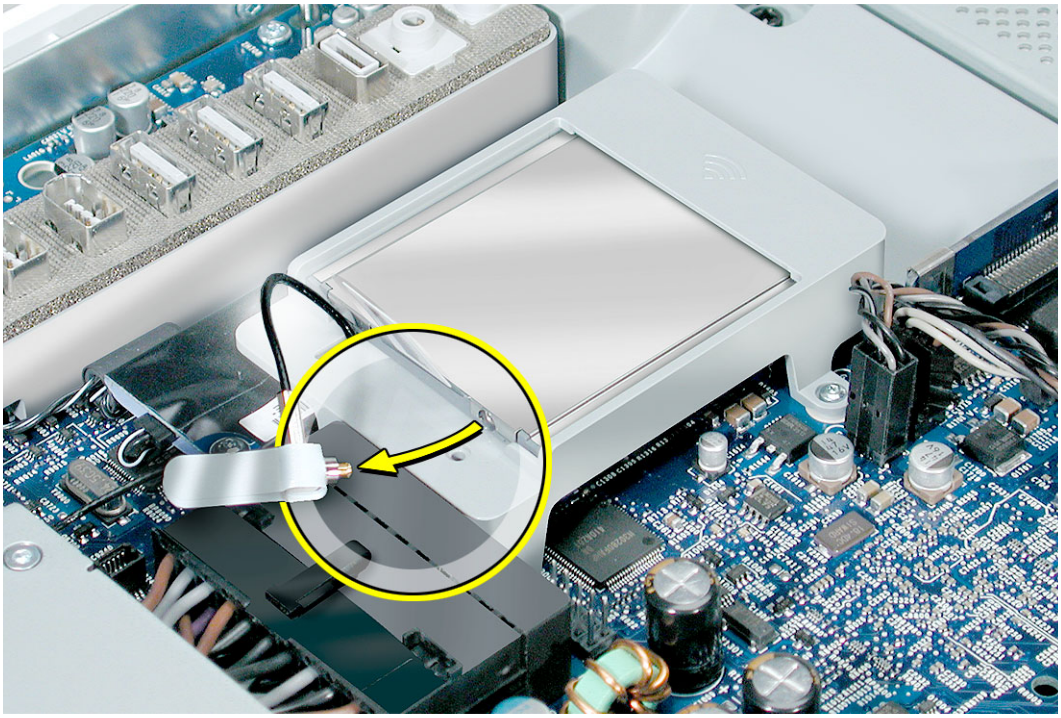
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



2. Locate the AirPort Extreme card.

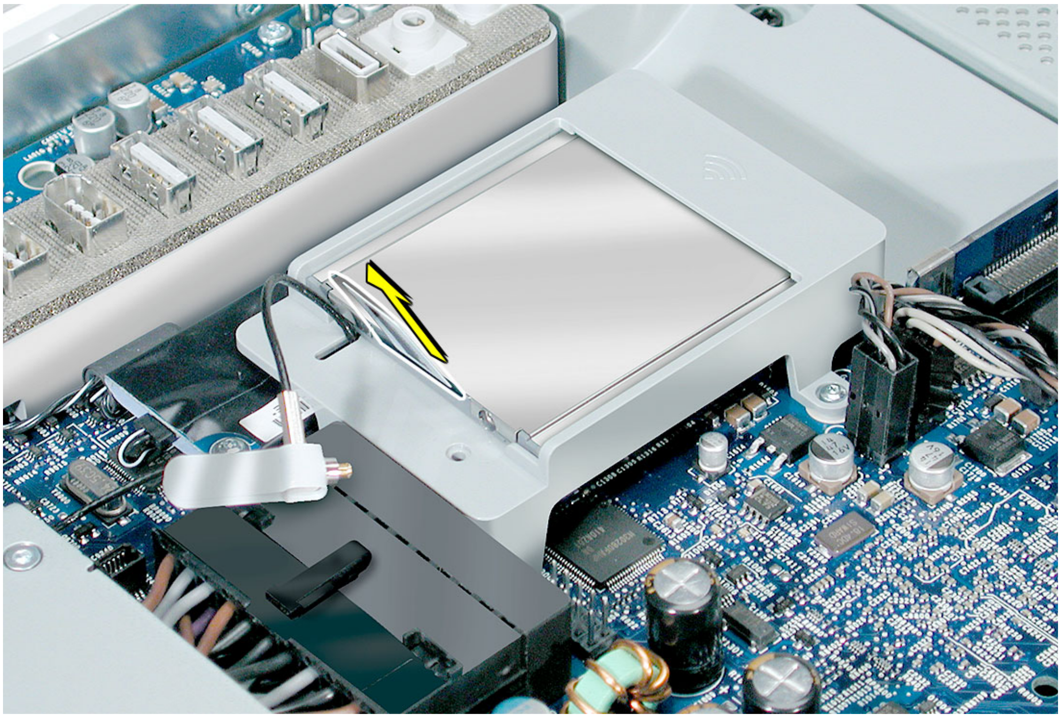


3. Disconnect the antenna cable from the end of the installed AirPort Extreme card.



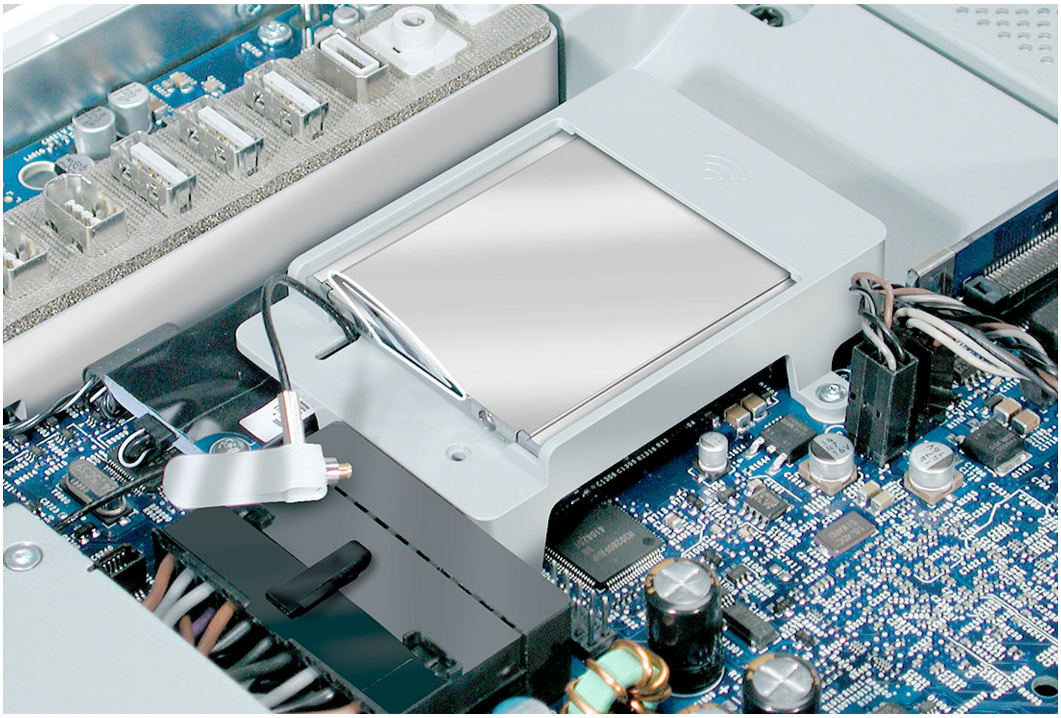
4. Pull the tab on the card to remove the card from the AirPort card guide.

   Important: Return this AirPort Extreme card to Apple in the packaging provided.

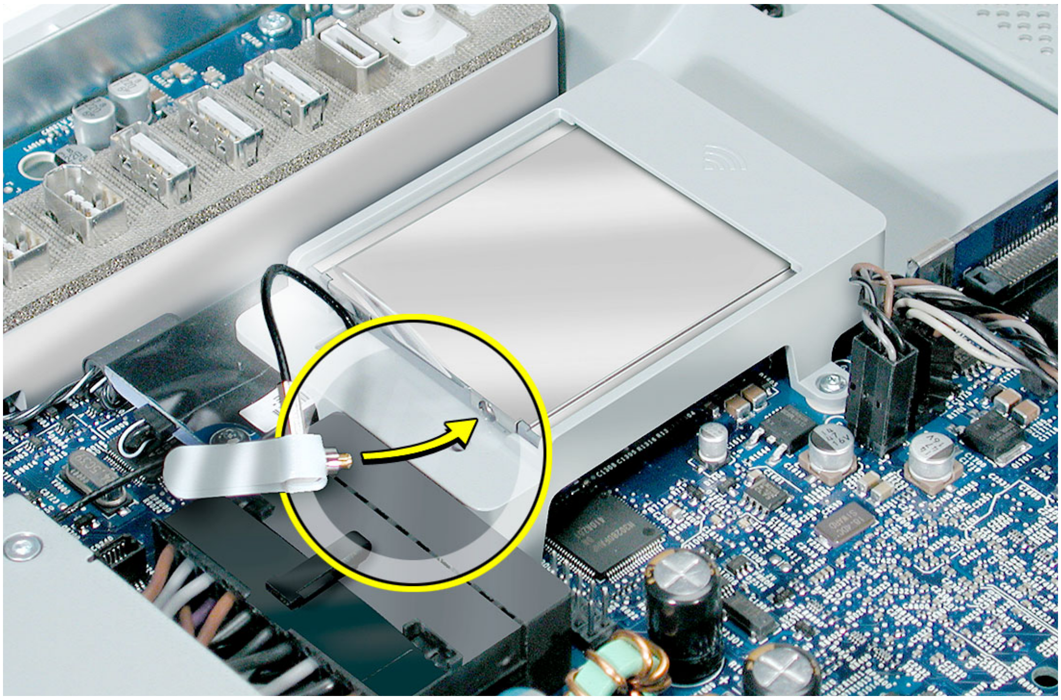


Replacing the AirPort Extreme Card

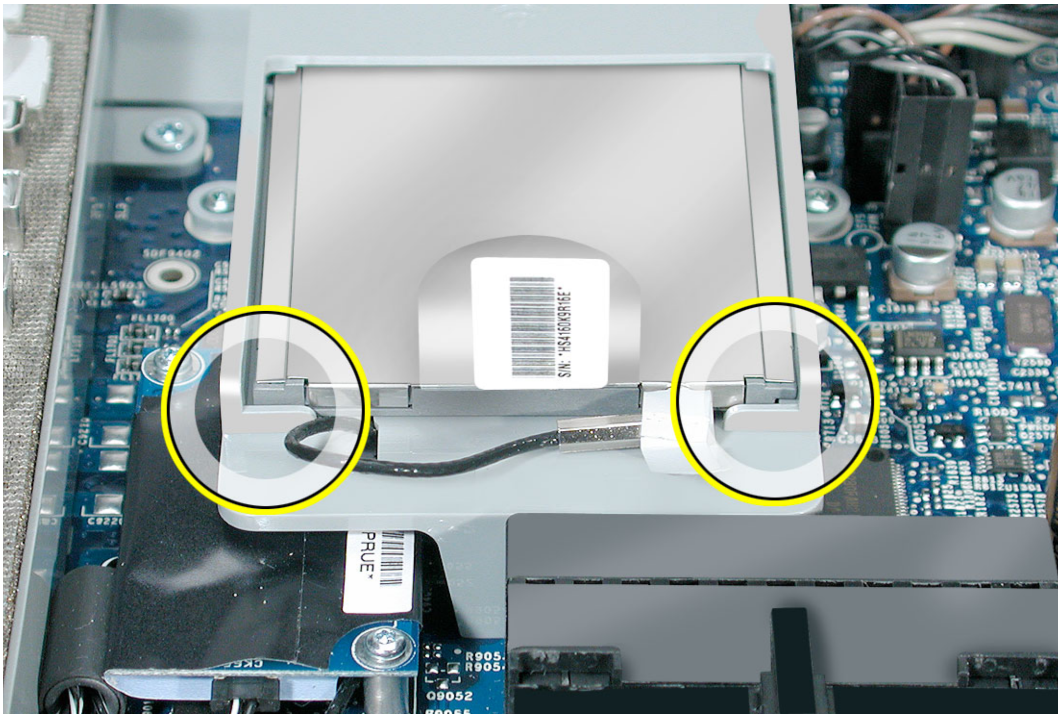
1. Remove the replacement AirPort Extreme card from its packaging.
2. Slide the AirPort Extreme card into the AirPort card guide channel until it clicks into place.



3. Connect the antenna cable to the end of the installed AirPort Extreme card.



4. Make sure the AirPort Extreme card is flush with the plastic AirPort card guide.



Battery

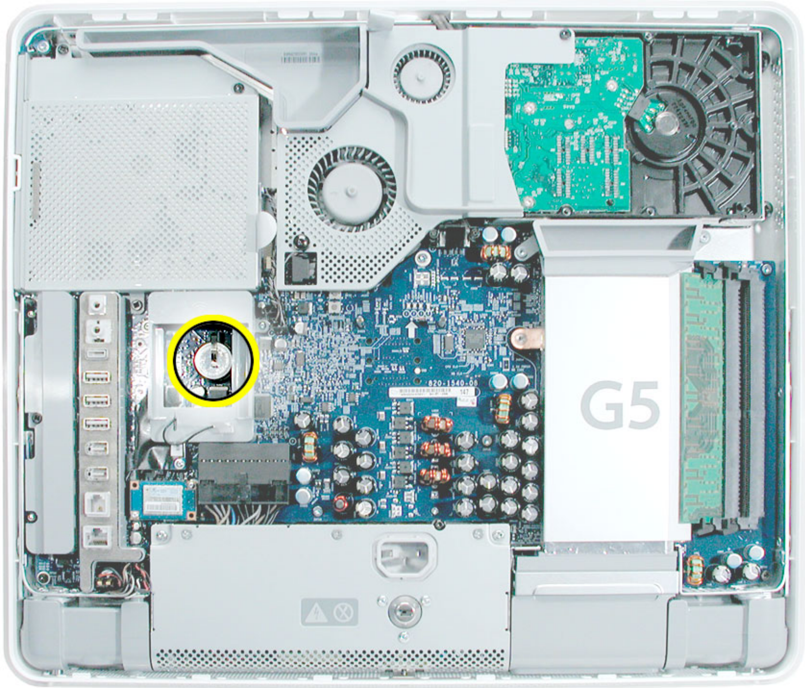
Tools

No tools are required for this procedure. You may, however, find a flat-blade screwdriver or the nylon probe tool useful in removing the battery from its holder.

Preliminary Steps

Before you begin, remove the back cover.

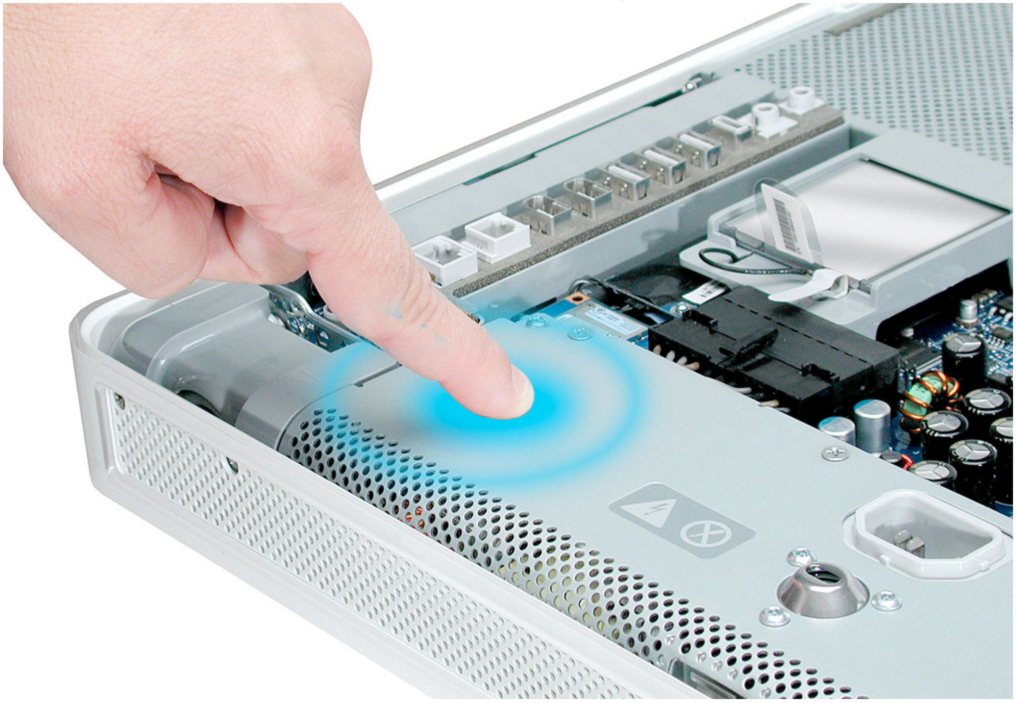
Part Location



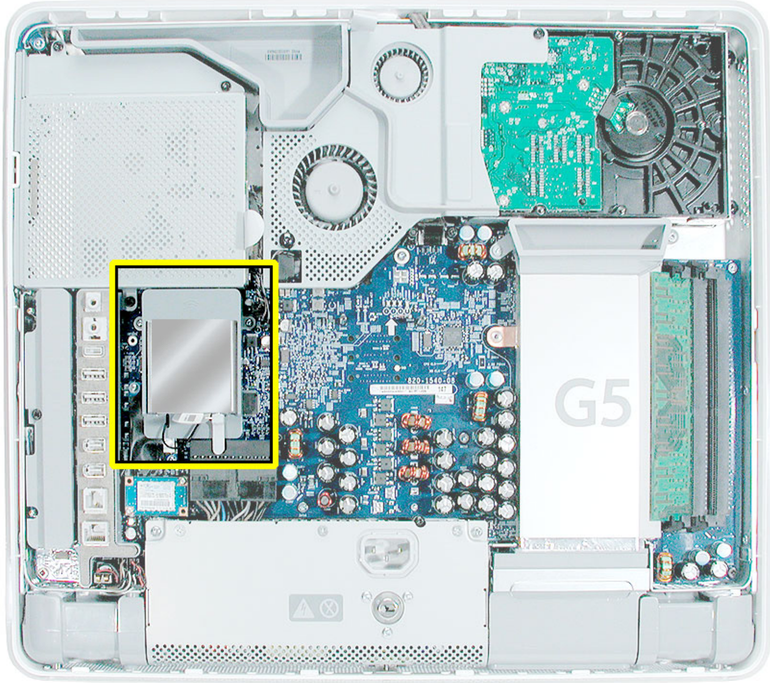
Removing the Battery

1. To access the battery other service modules have to be removed. This procedure will show you how to remove and replace each module. As you remove each module, set it aside, along with the screws for that module.
2. **Important:** Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

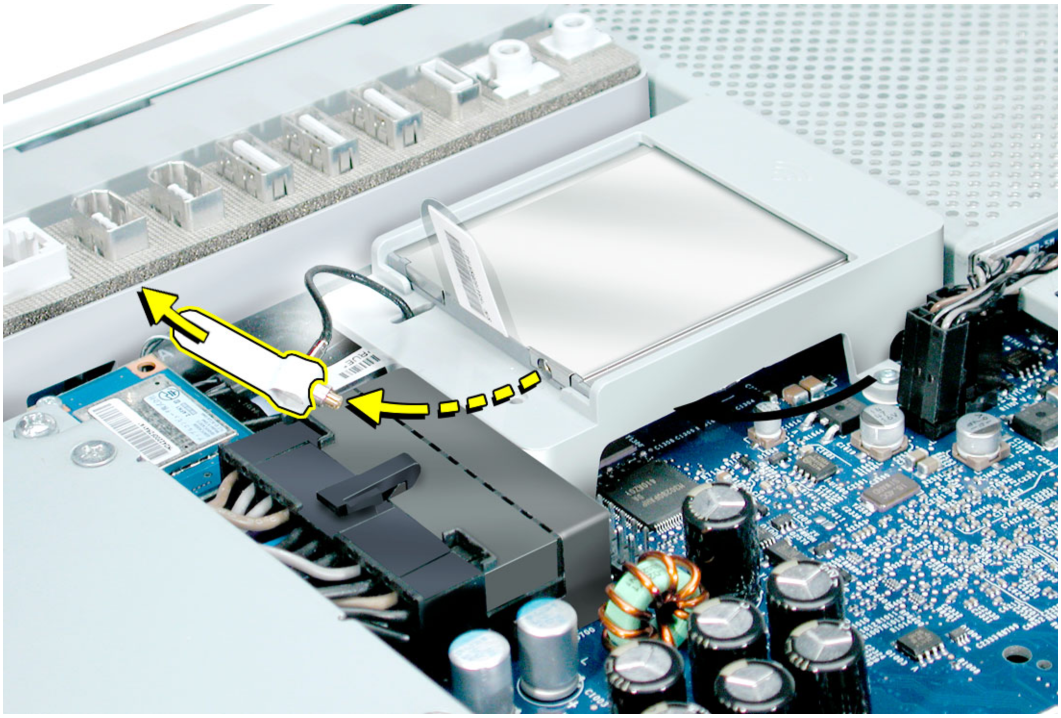
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



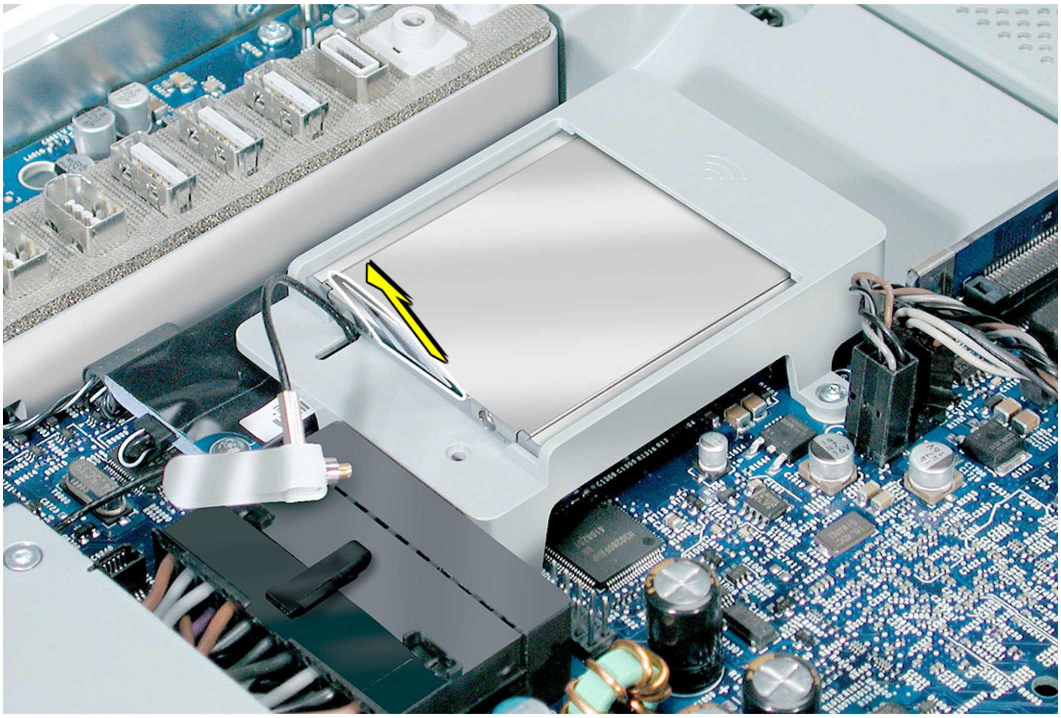
3. Locate the AirPort Extreme card. The battery is located below the AirPort Extreme card. **Note:** If an AirPort Extreme card is not installed, go on to step 7.



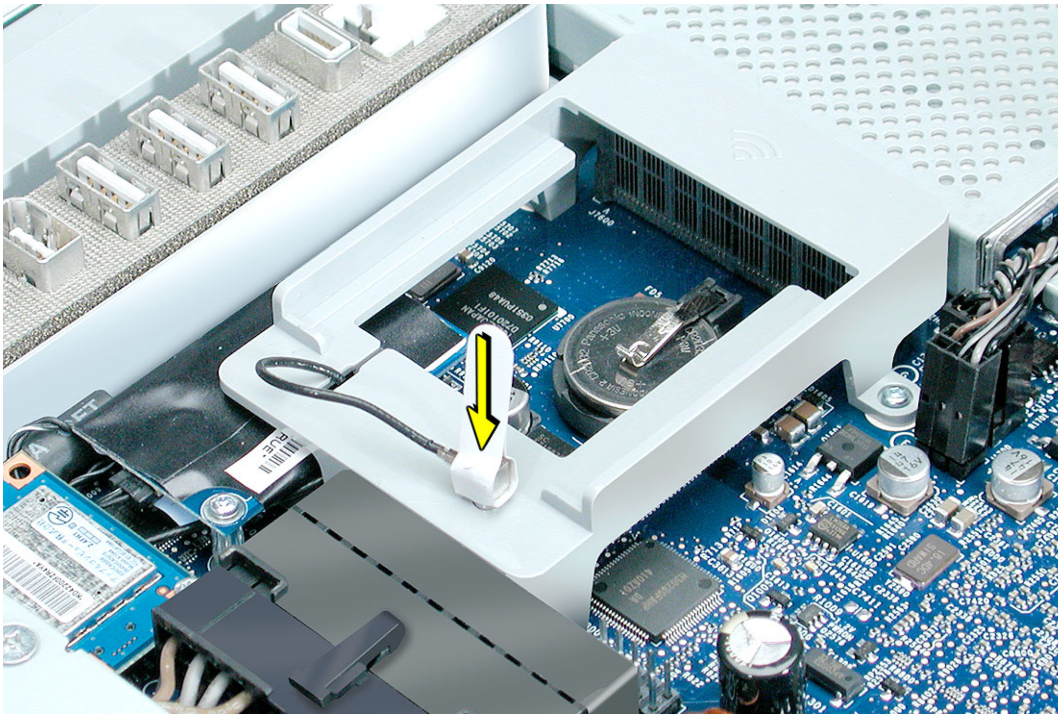
4. Disconnect the antenna cable from the end of the installed AirPort Extreme card.



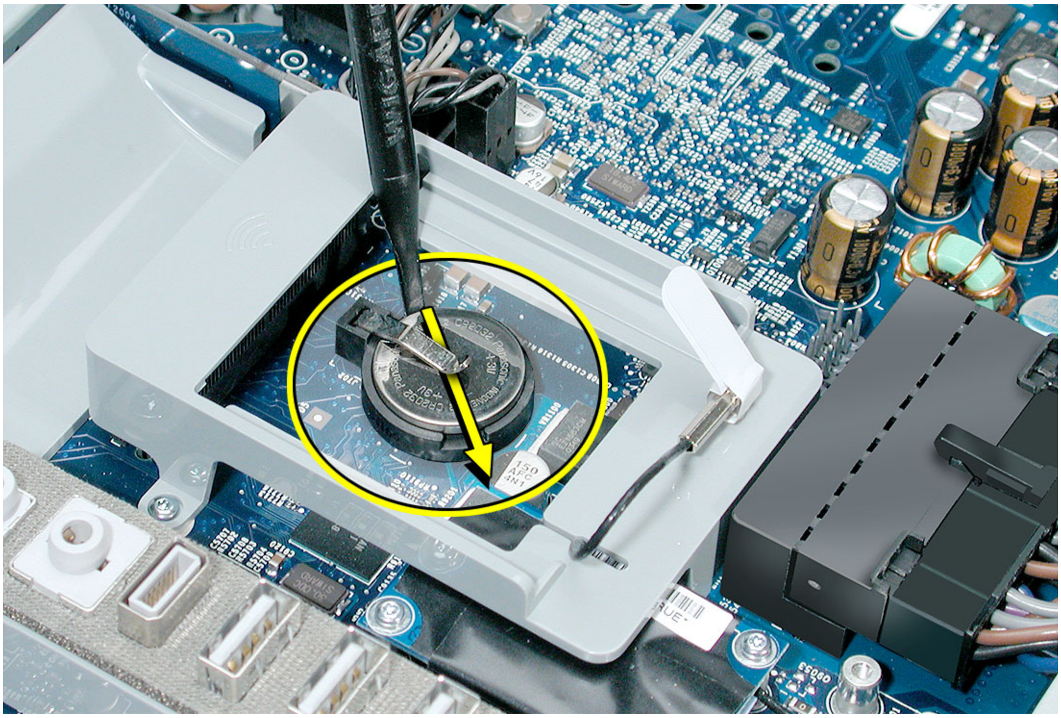
5. Pull the tab on the card to remove the card from the AirPort card guide.



6. Reconnect the antenna cable to the hole on the AirPort card guide.

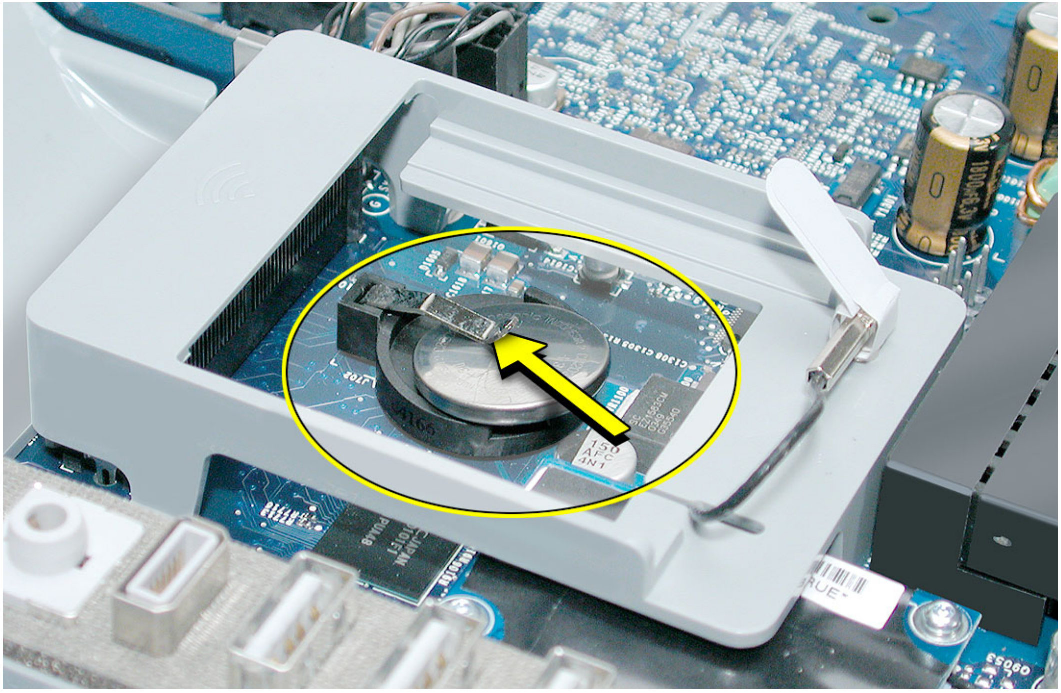


7. WIth a pencil or other plastic tool, push the battery in the direction of the arrow to free the battery from the metal clip.

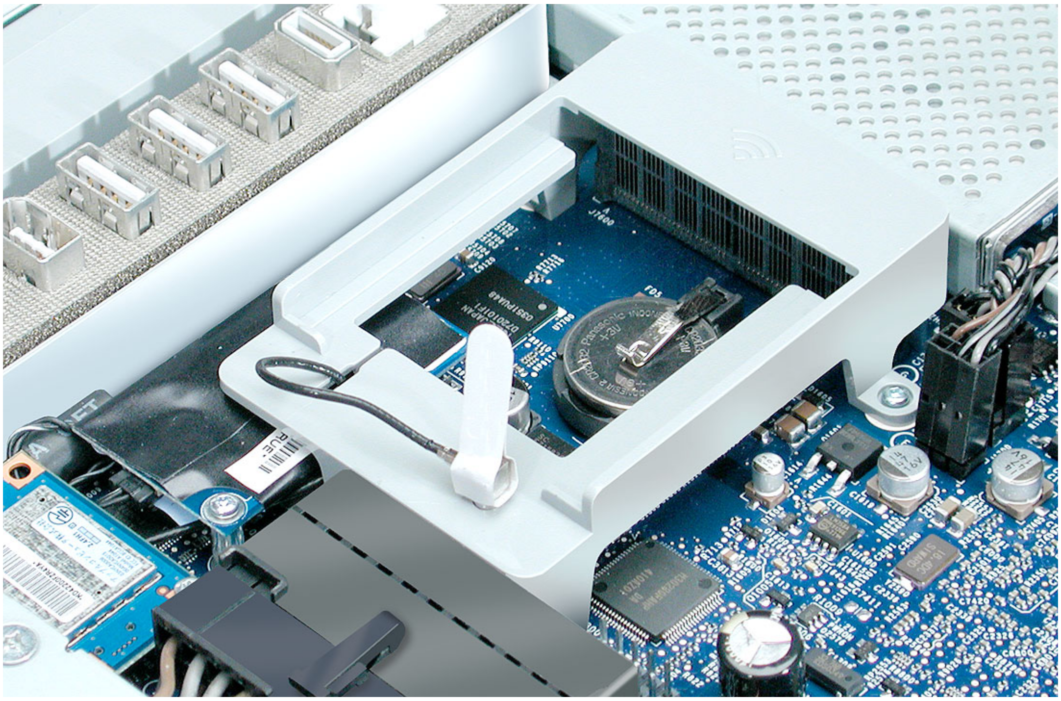


Replacing the Battery

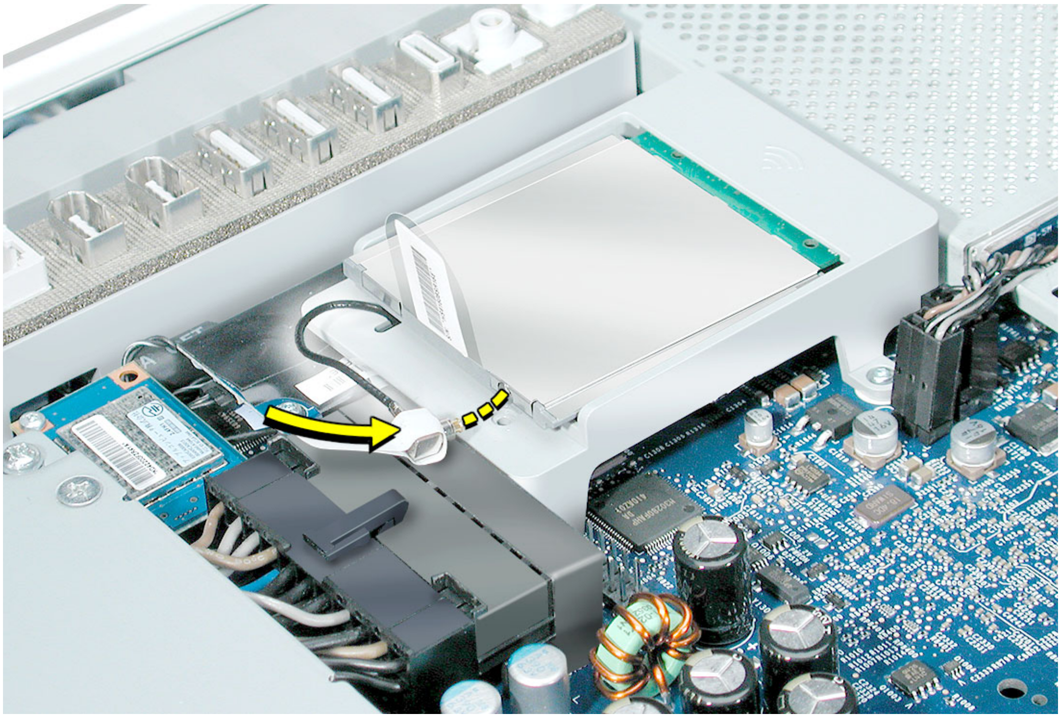
1. Remove the replacement battery from its packaging.
2. Holding the battery positive side up, push the battery (in the direction of the arrow) under the battery clip. The battery should slip into place under the clip.



3. Replace the AirPort Extreme card. Remove the AirPort antenna cable (by pulling the tab) from the opening on the AirPort Extreme guide rail.



4. Slide the AirPort Extreme card into the slot until it clicks into place. Connect the AirPort antenna cable to the AirPort Extreme card.



Midplane Assembly

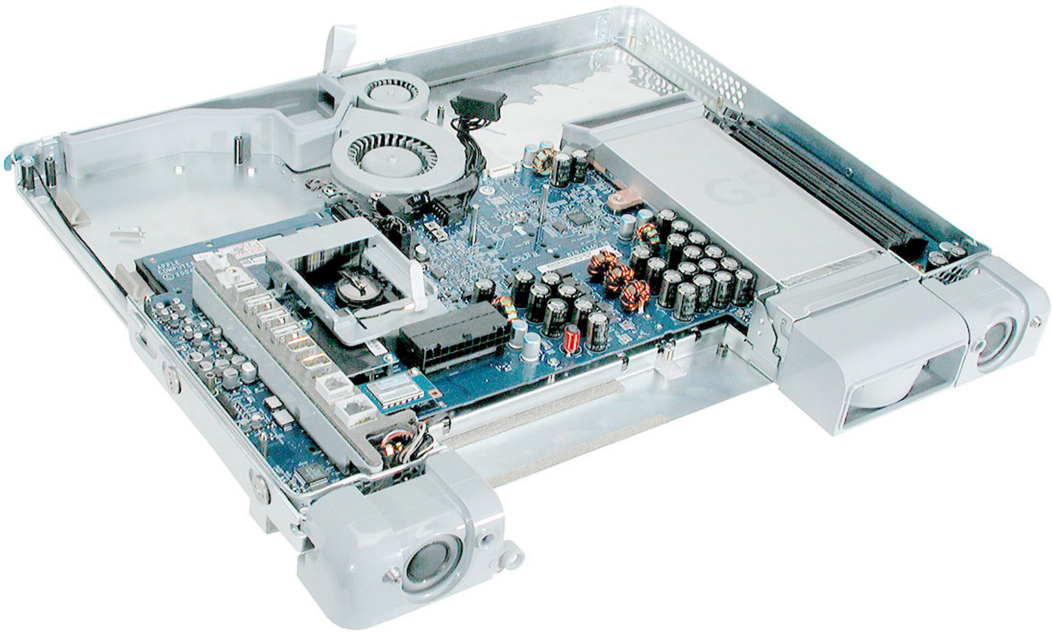
Tools Required

- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Flat blade screwdriver
- Screw tray or equivalent to hold the screws

Preliminary Steps

Before you begin, remove the back cover.

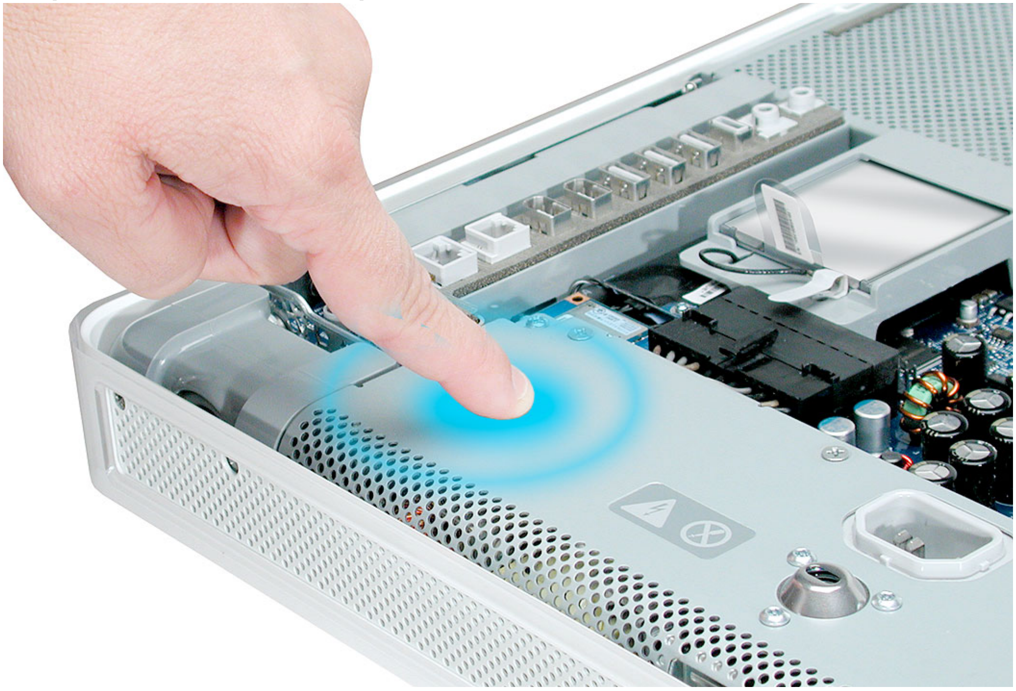
Part Location



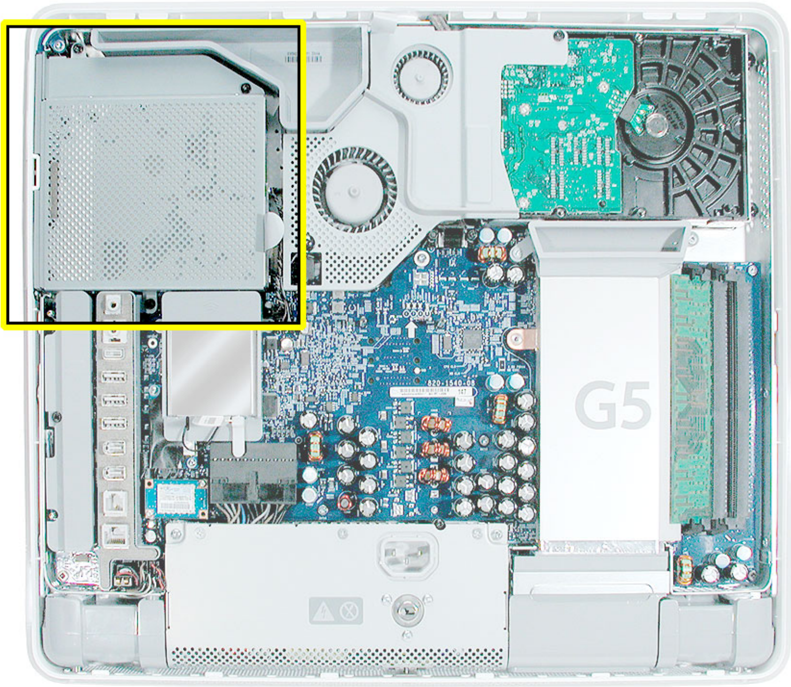
Removing the Midplane Assembly

1. To access the midplane assembly you must first remove other service modules. This procedure will show you how to remove and replace these modules. **Note:** As you remove each module, set it aside, along with the screws for that module.
2. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

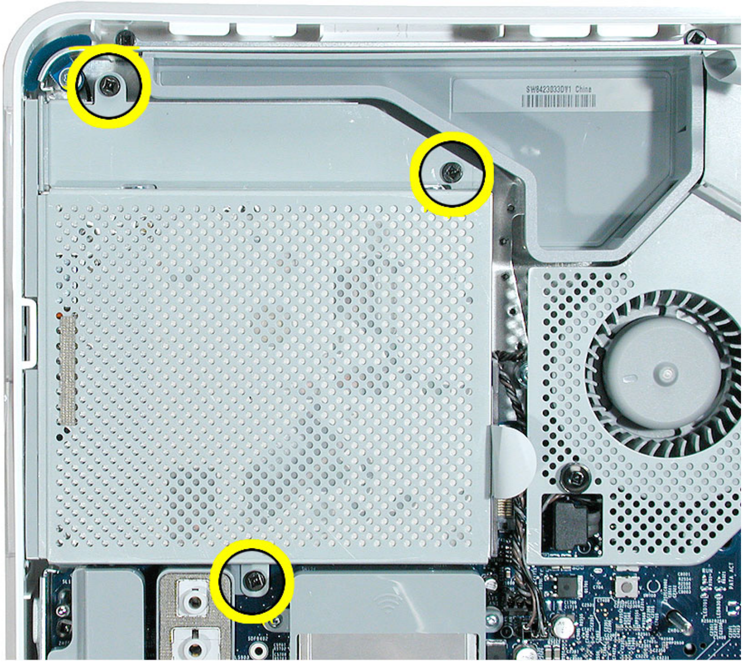
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



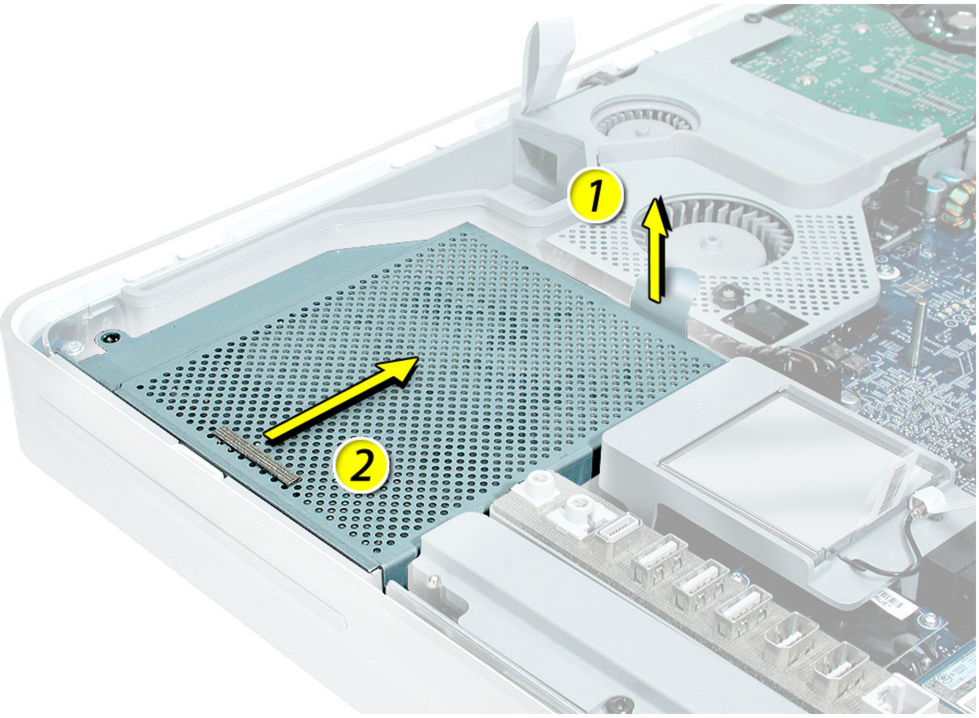
3. Locate the optical drive in the top left corner.



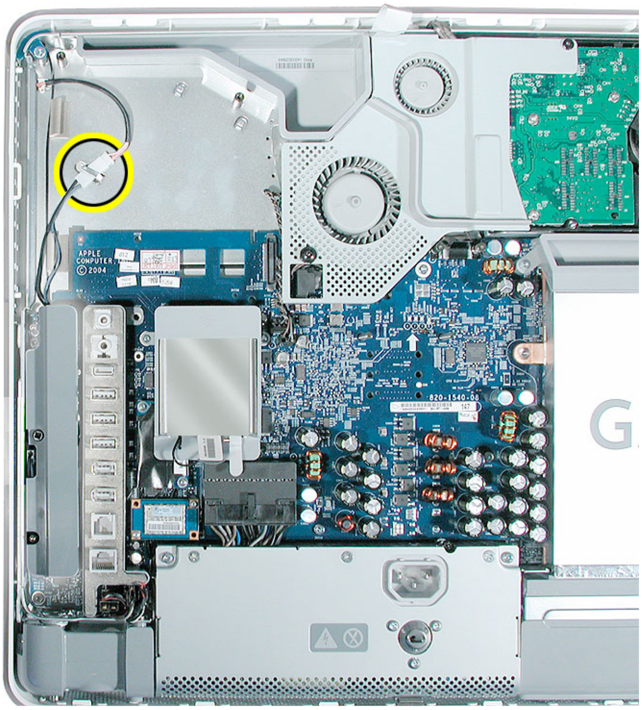
4. Using the tool provided, or a Phillips #1 screwdriver, remove the three optical drive screws circled below. Set the screws aside.



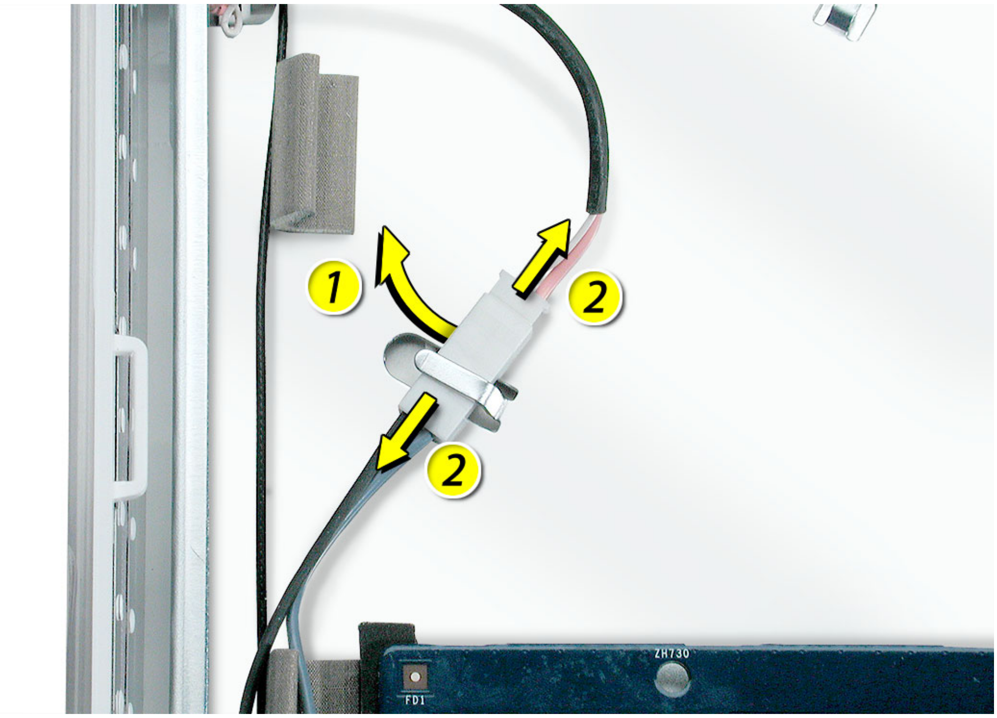
5. Pull the optical drive tab straight up and then to the right. Set the optical drive aside.



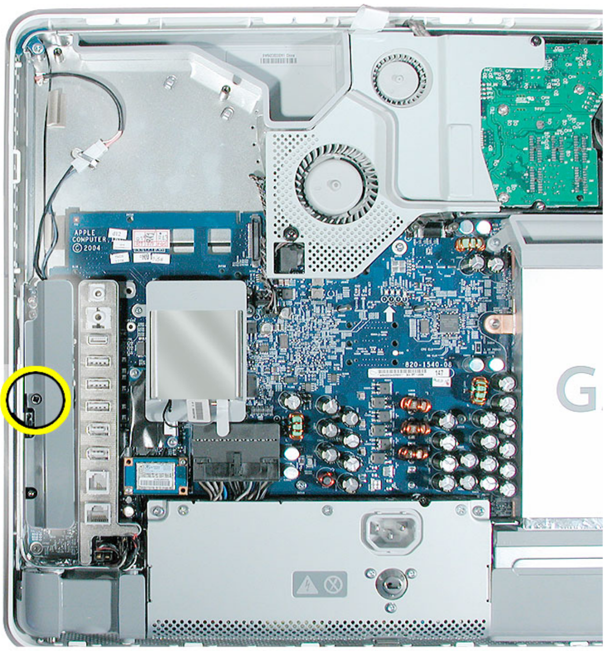
6. Locate the inverter-to-display panel cable connector.



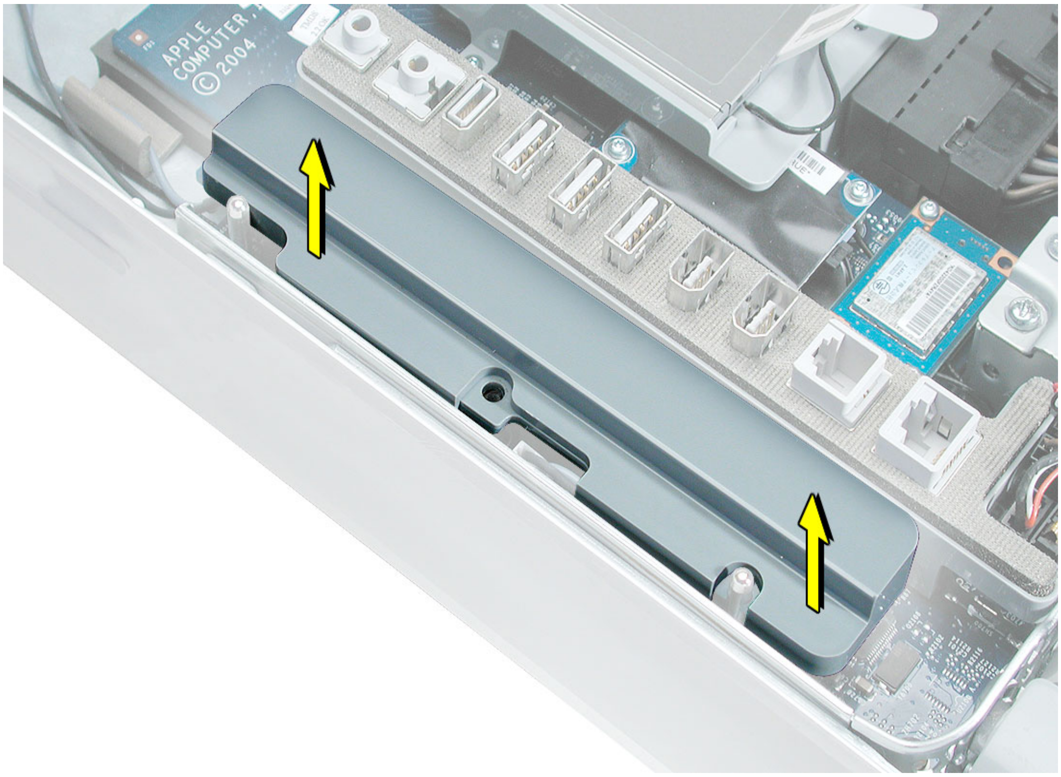
7. Release the cable from the clip. Disconnect the cable connector.



4. Using the tool provided, or a Phillips #1 screwdriver, remove the inverter screw.

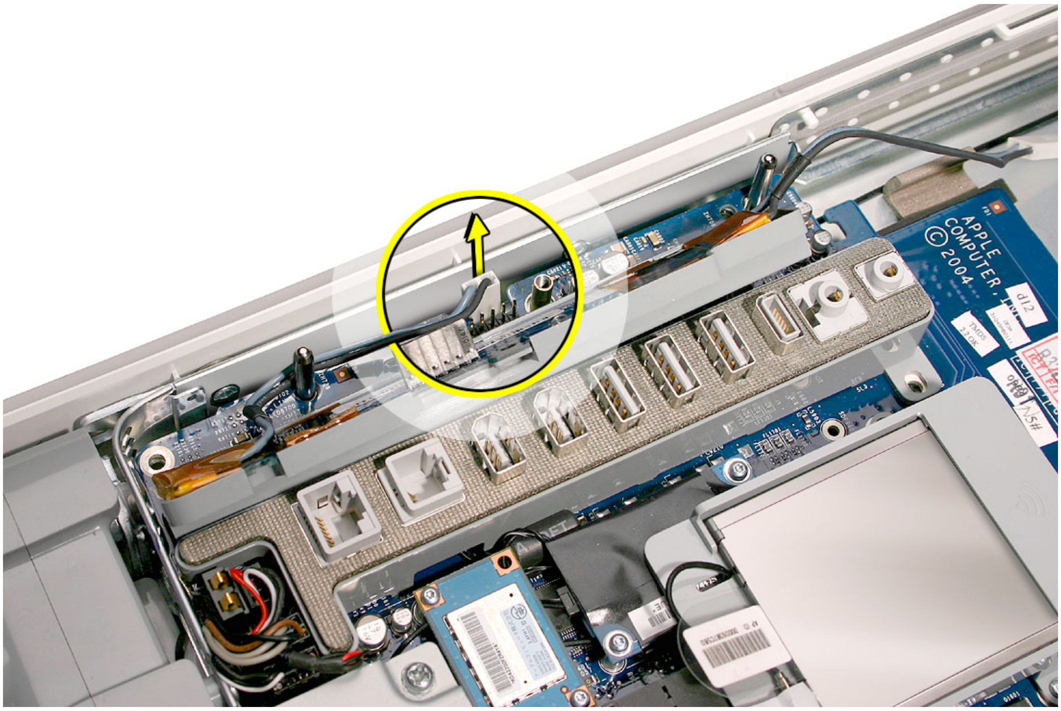


5. Lift the inverter straight up to disconnect the inverter board.

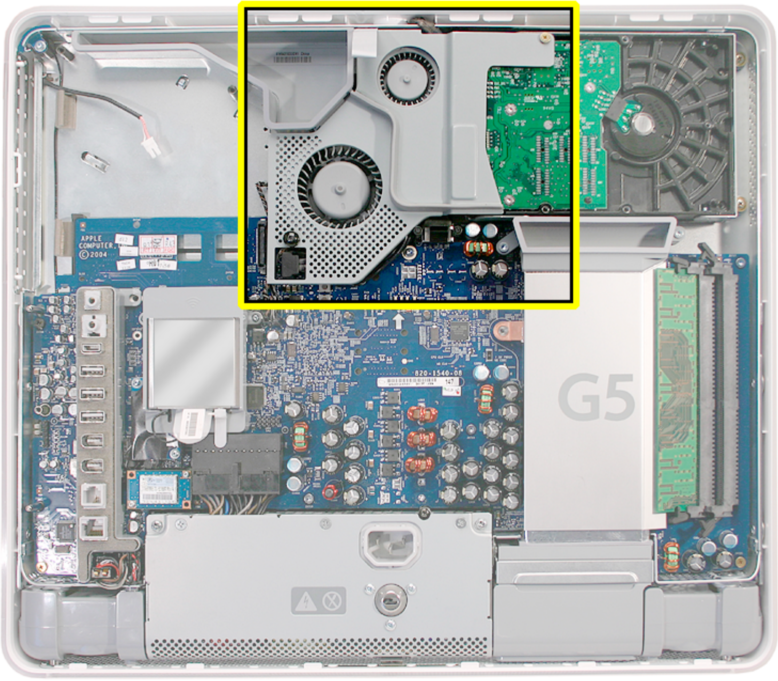


6. Disconnect the white connector (circled below) by pulling it straight up. Set the inverter board aside.

   Note: Be careful not to prick your fingers on the pins next to the white connector.

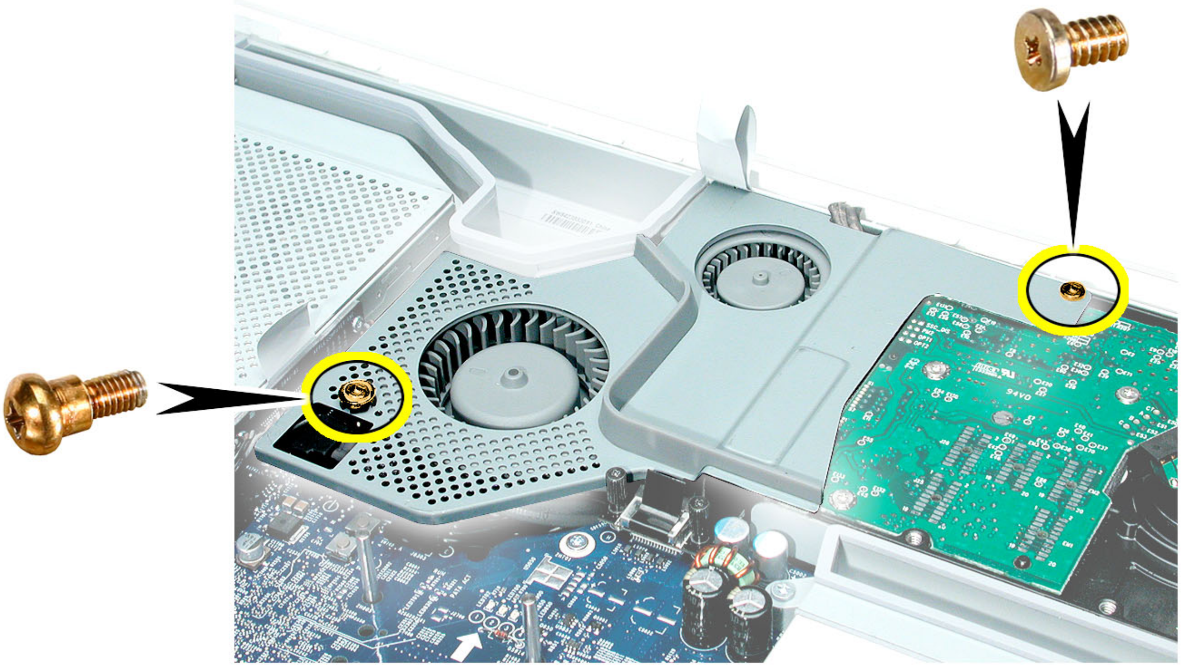


7. Locate the fan cover shown below.

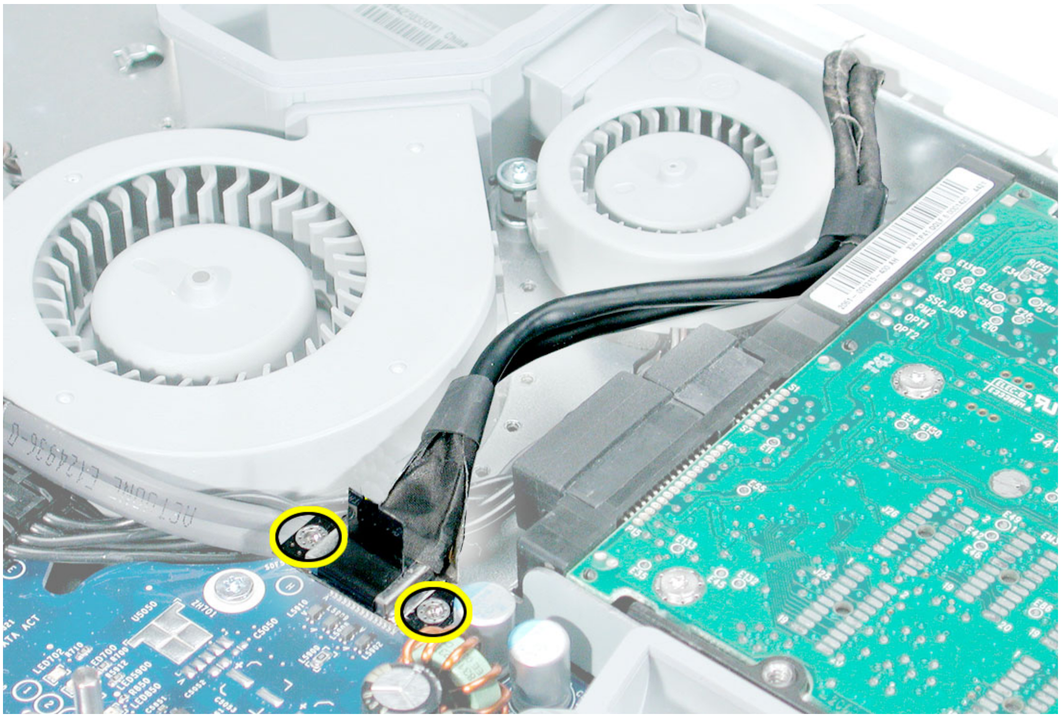


4. Using the tool provided, or a Phillips #1 screwdriver, remove the two fan cover screws. Lift the fan cover off the midplane and set the fan cover aside

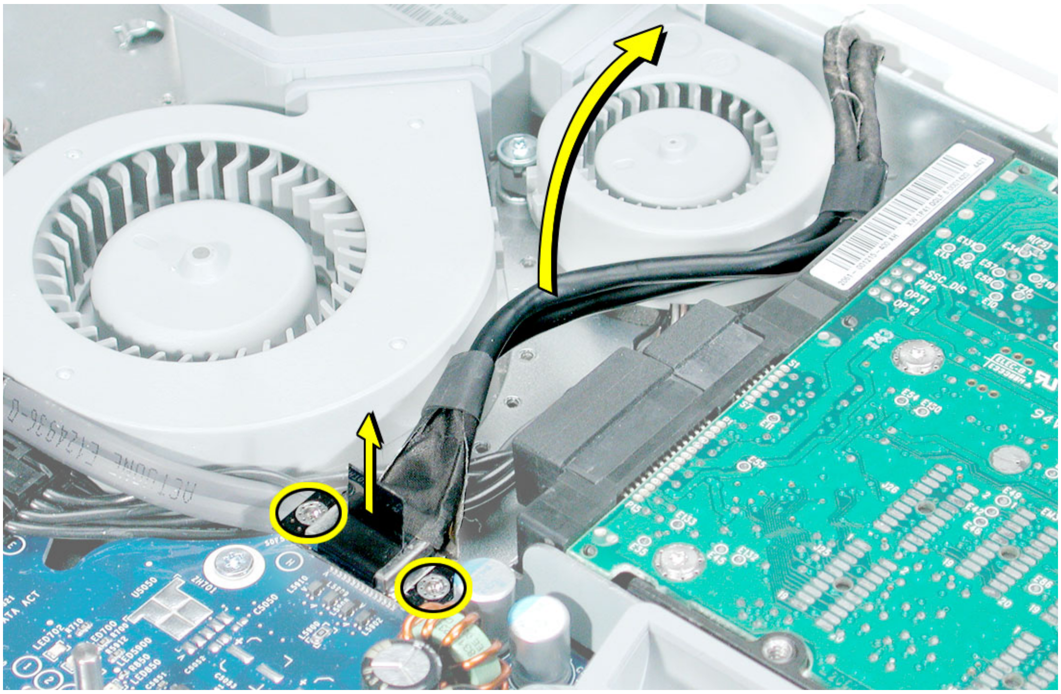
.



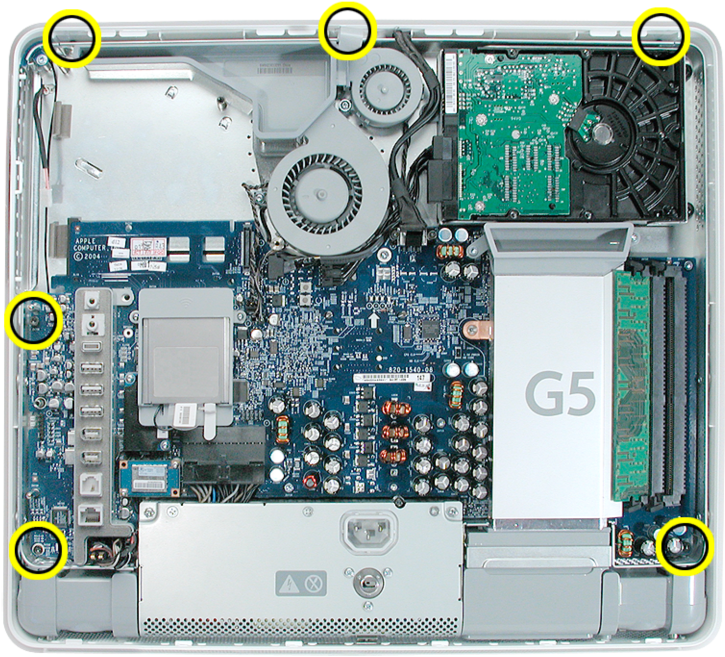
4. Locate the black video cable next to the fans. Remove the two screws and set them aside.



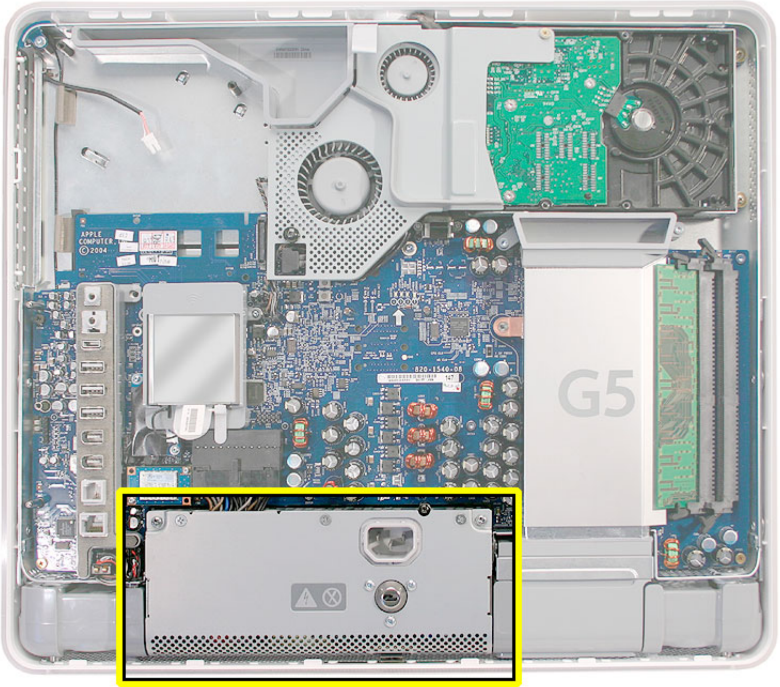
5. Pull up on the black tab to disconnect the cable. Flip the cable back, so it is out of the way.



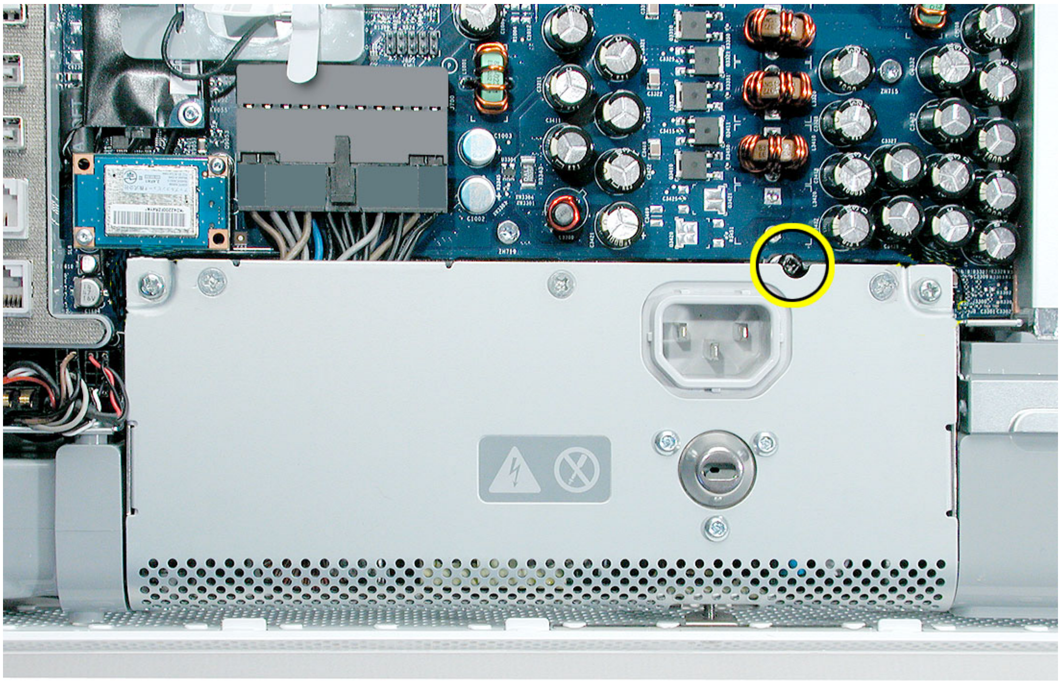
4. Using a Phillips screwdriver, remove six screws that attach the midplane to the panel housing. Three short screws are located along the top of the case and the longer screws attach on the midplane board. Set the screws aside.


APPLE
COMPUTER
©2004
G5

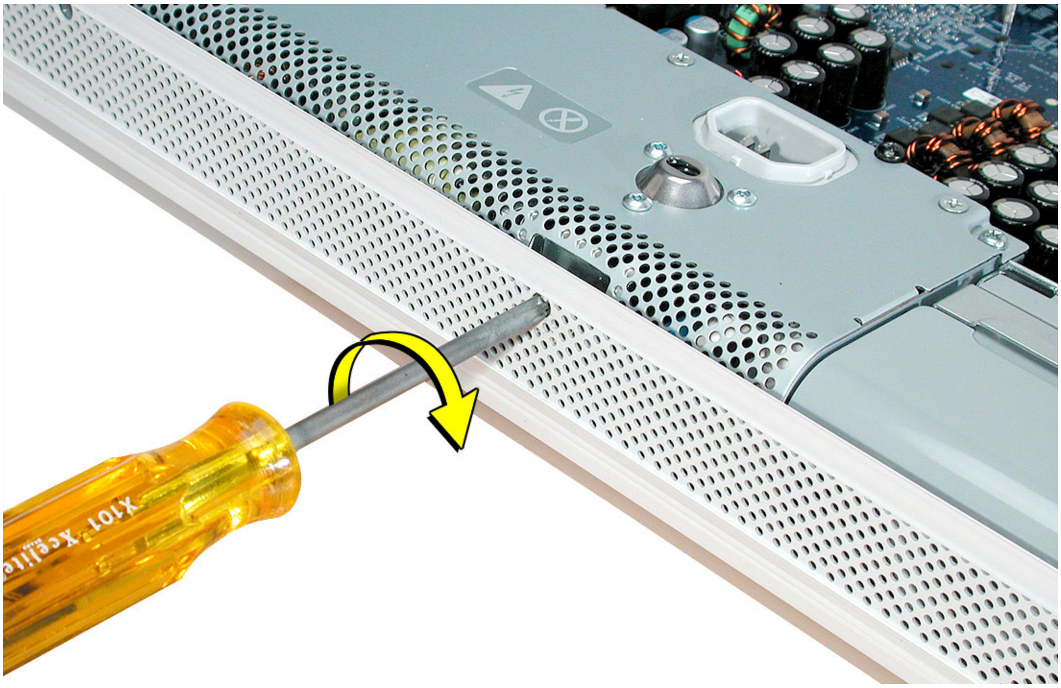
5. Locate the power supply at the bottom of the picture below.


APPLE
COMPUTER
©2004
G5

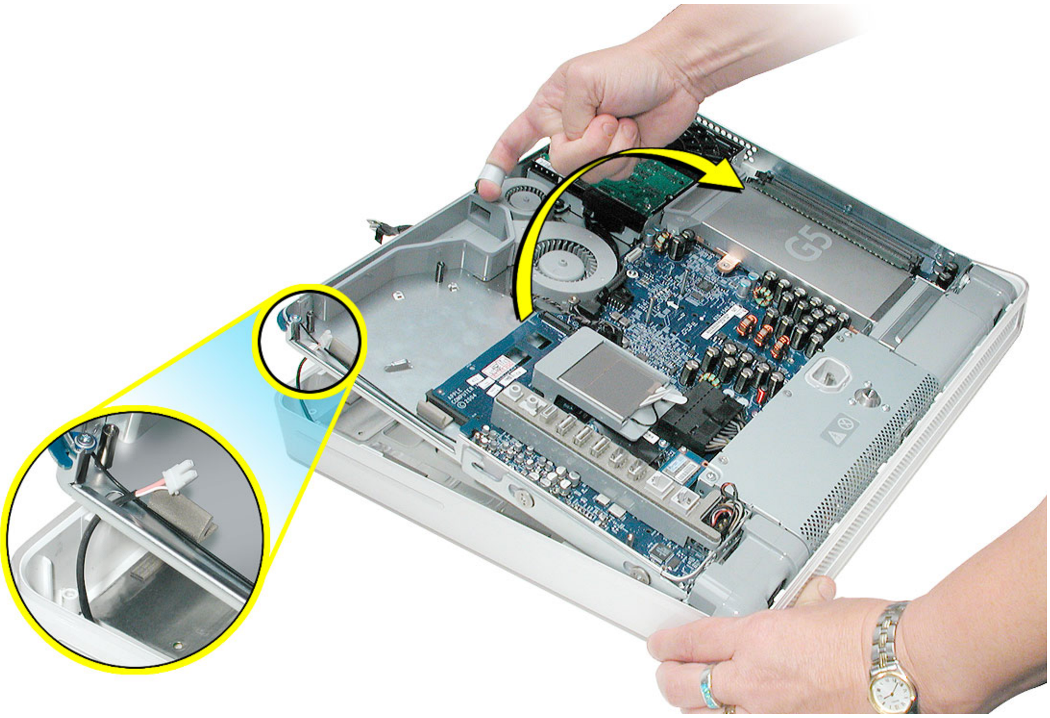
6. Loosen the captive power supply screw (circled below) by turning it counterclockwise until it is flush with the top of the power supply. The screw is captive; it will not come out. **Note:** You do not need to remove the power supply.



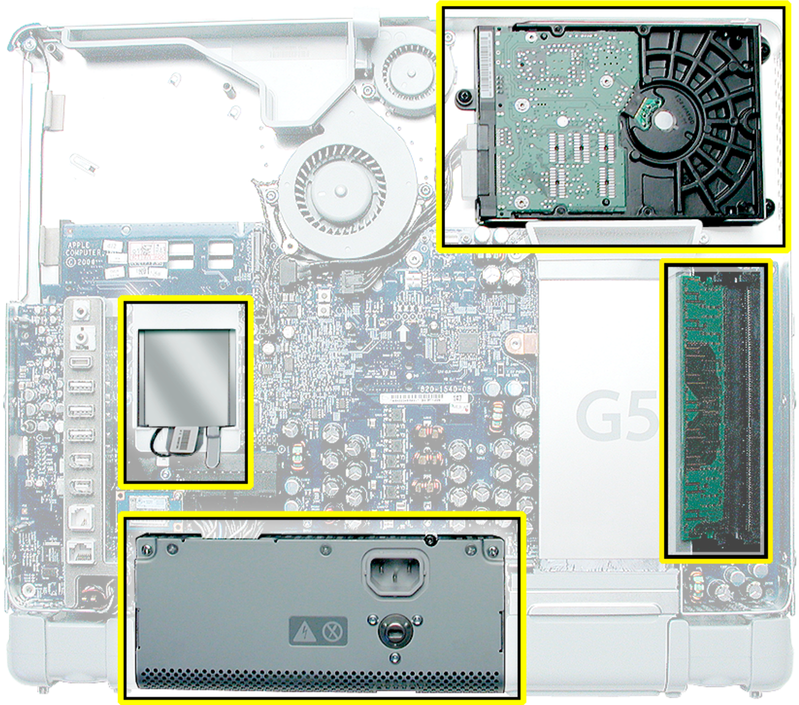
7. Turn the middle case screw clockwise about five revolutions. This releases a screw clamp that holds the power supply in the display/bezel assembly.



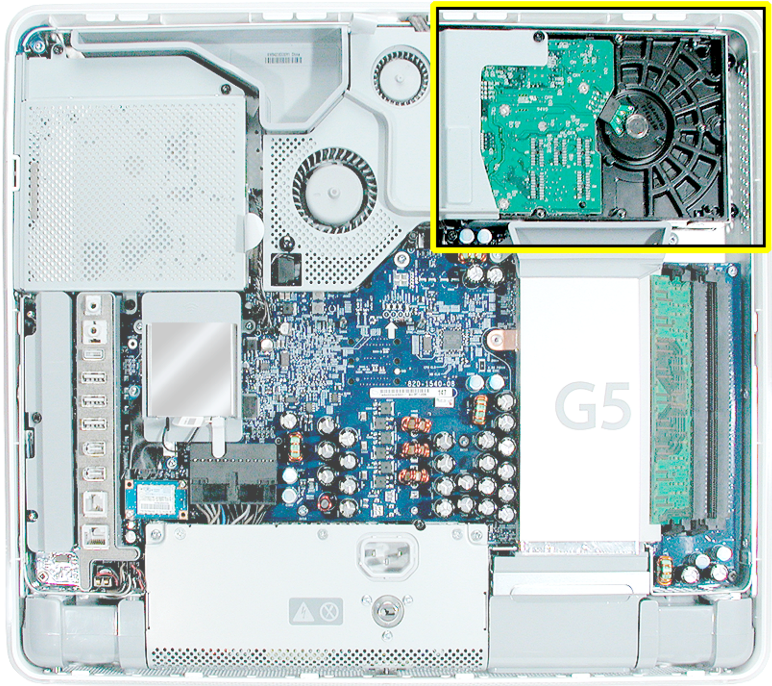
8. Locate the pull tab at the top of the computer. Pull the tab up to release the midplane assembly from the display/bezel. Pull the cable (in the top left corner) down through the opening in the midplane. Set the midplane aside.



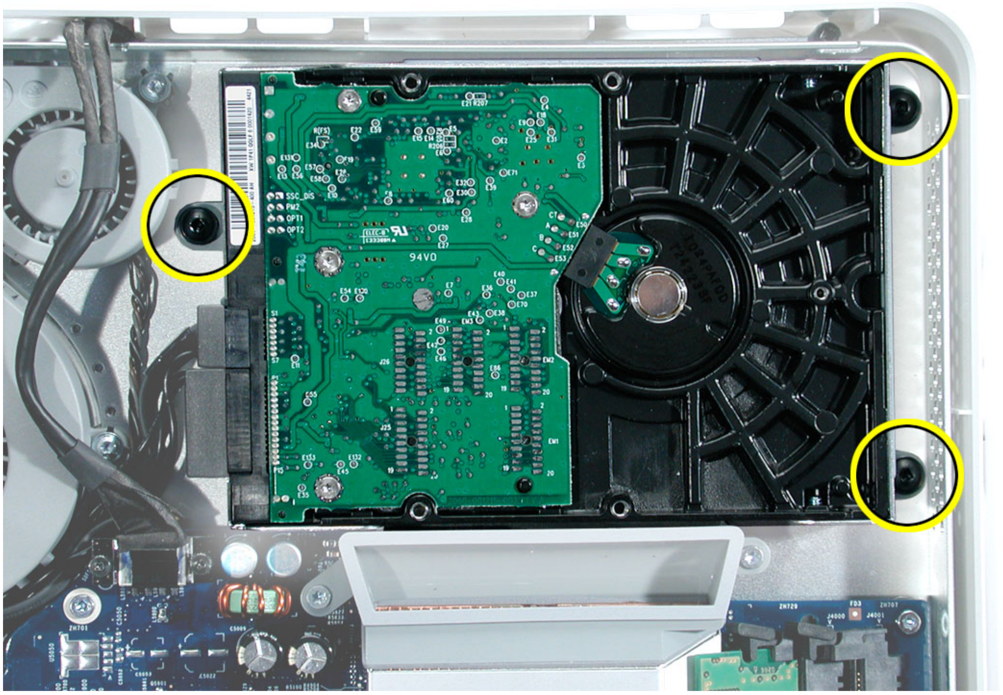
9. Remove the highlighted parts shown below (hard drive, memory, power supply, and the AirPort Extreme card) before retuning the midplane to Apple. Continue with the procedure for removal instructions.



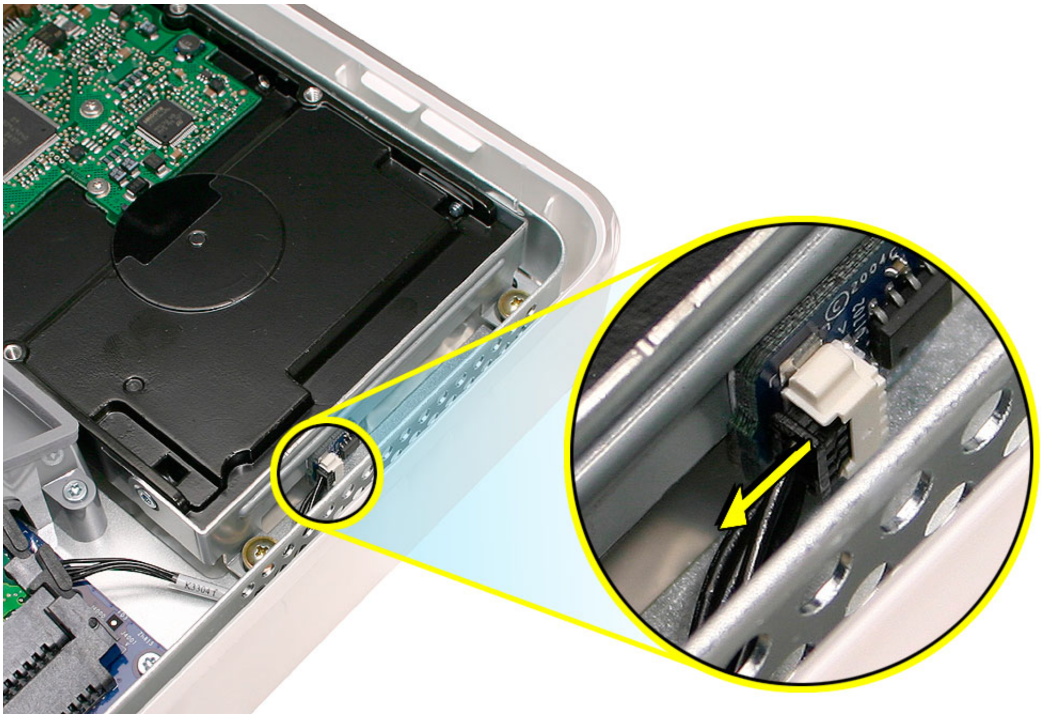
10. Locate the hard drive in the top right corner.



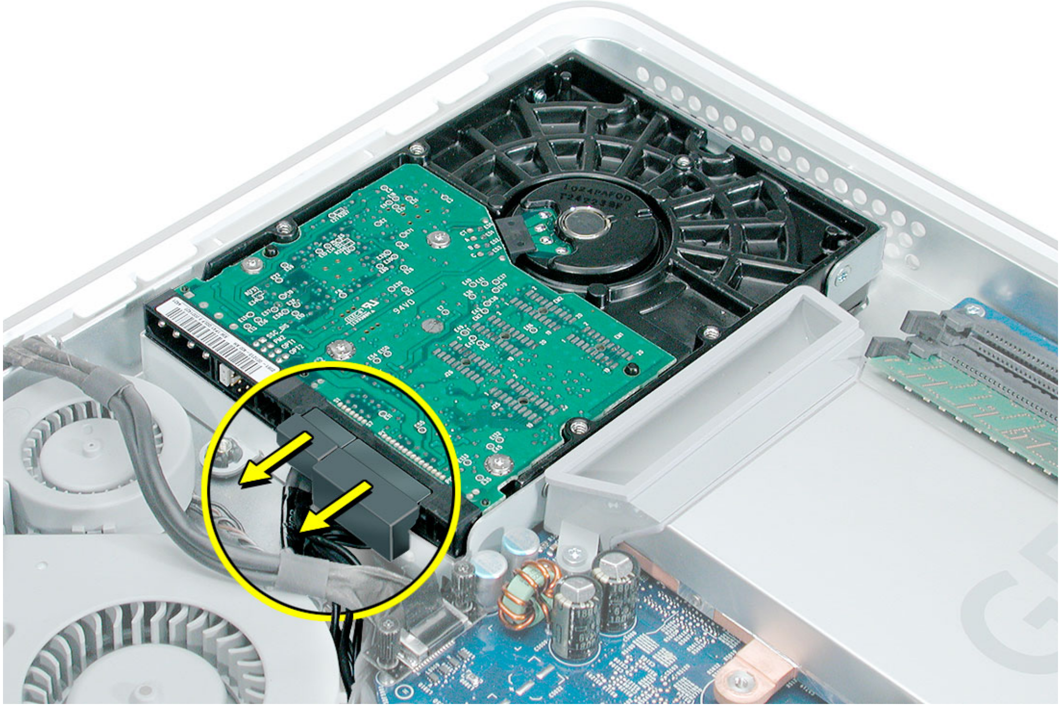
4. Remove the three hard drive screws. Set the screws aside.



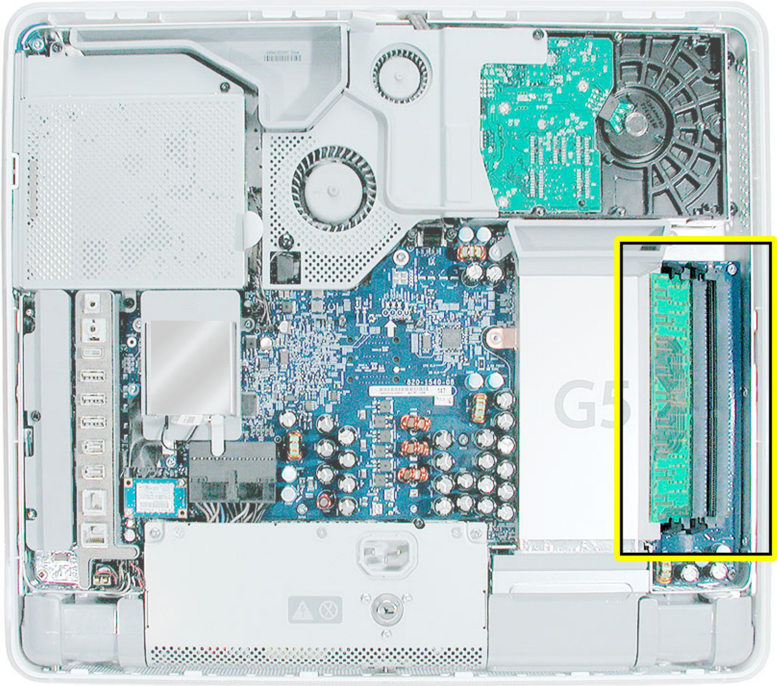
5. Carefully lift the hard drive straight up, about one inch, and disconnect the black cable from the white connector on the hard drive. **Note:** Leave the other end of the cable attached to the logic board.



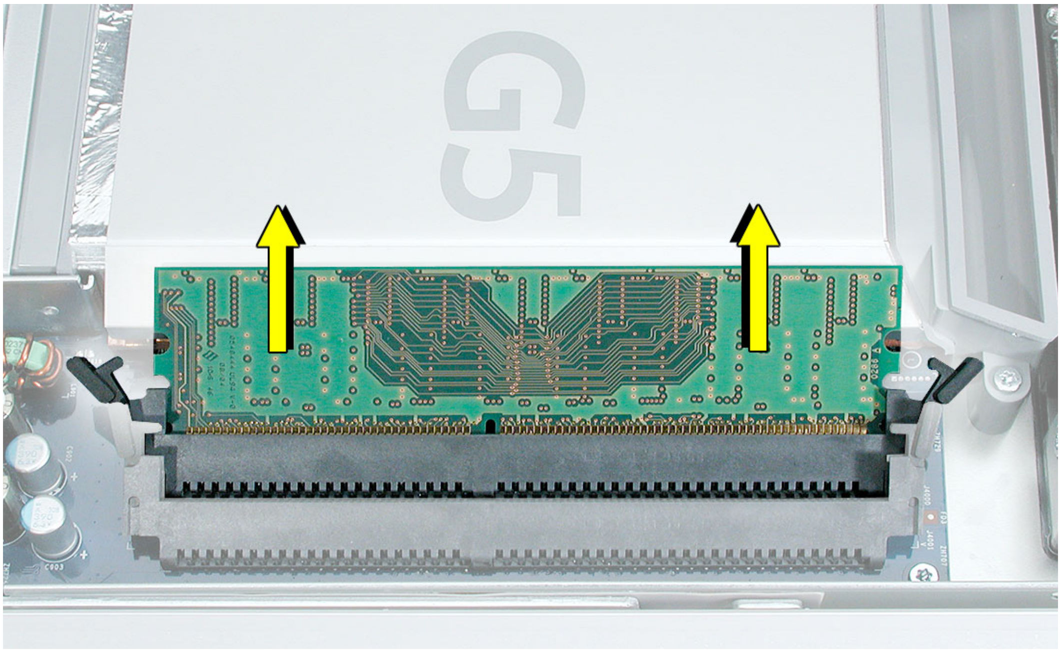
6. Using your fingers, or a flatblade screwdriver, disconnect the drive data cable and power cable from the hard drive. Lift the hard drive up and out of the midplane assembly.



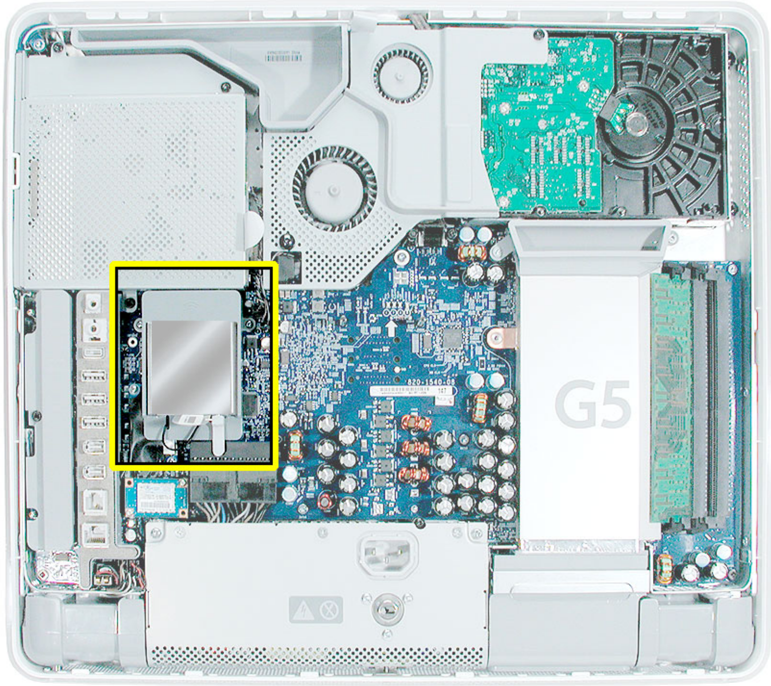
7. Locate the memory module(s) in the bottom right corner.



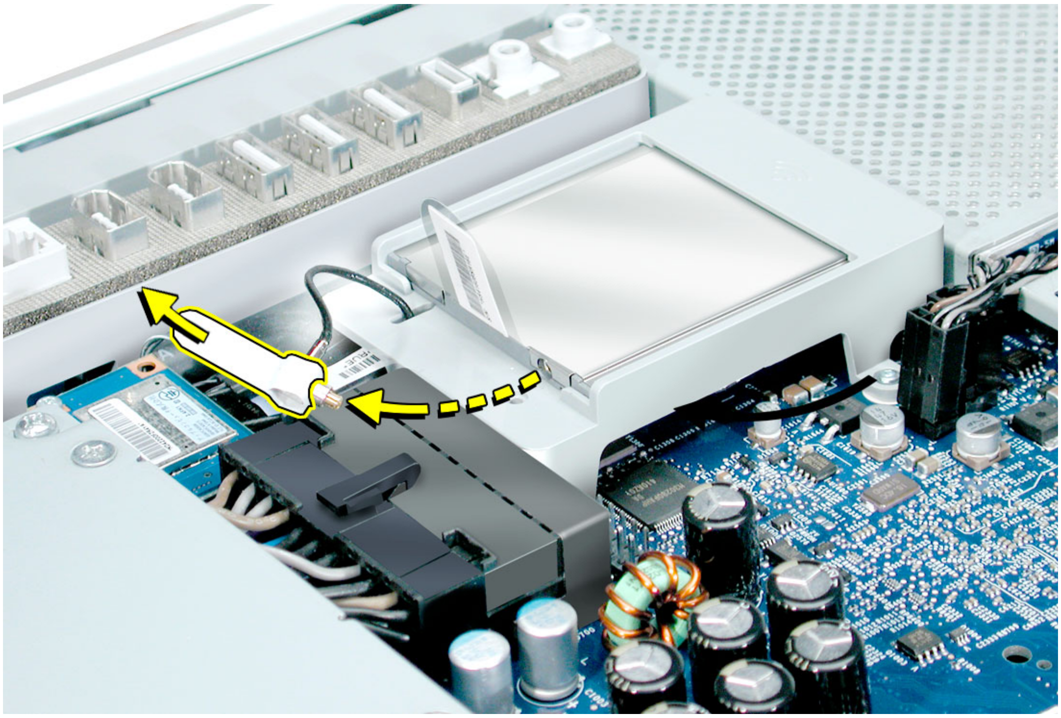
8. Rotate the computer counterclockwise so the memory is in the position shown below.
9. To release the memory from its slot, push down on the two side latches. Then pull the memory module out of the slot. Repeat this step if you have a second memory module.



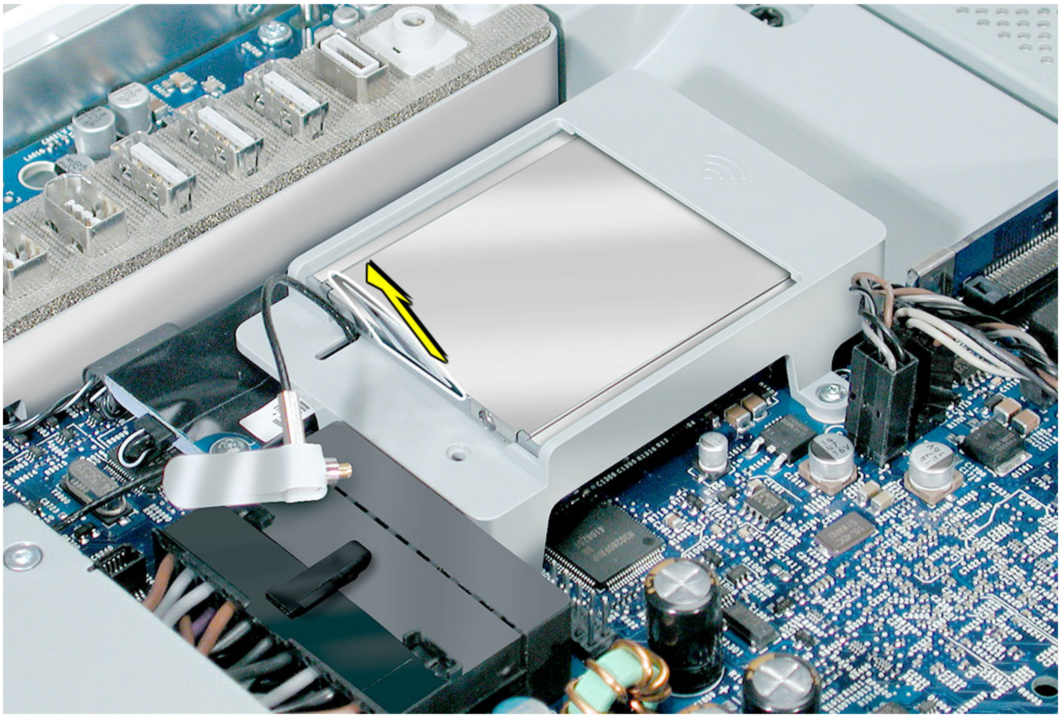
10. Locate the AirPort Extreme card.



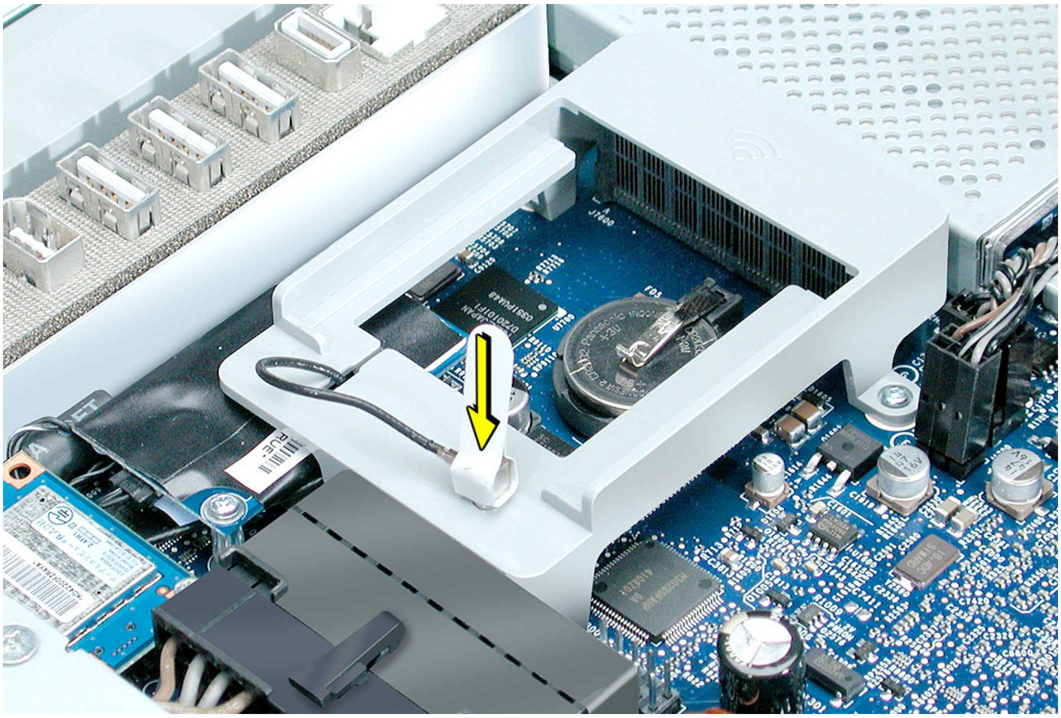
11. Disconnect the antenna cable from the end of the installed AirPort Extreme card.



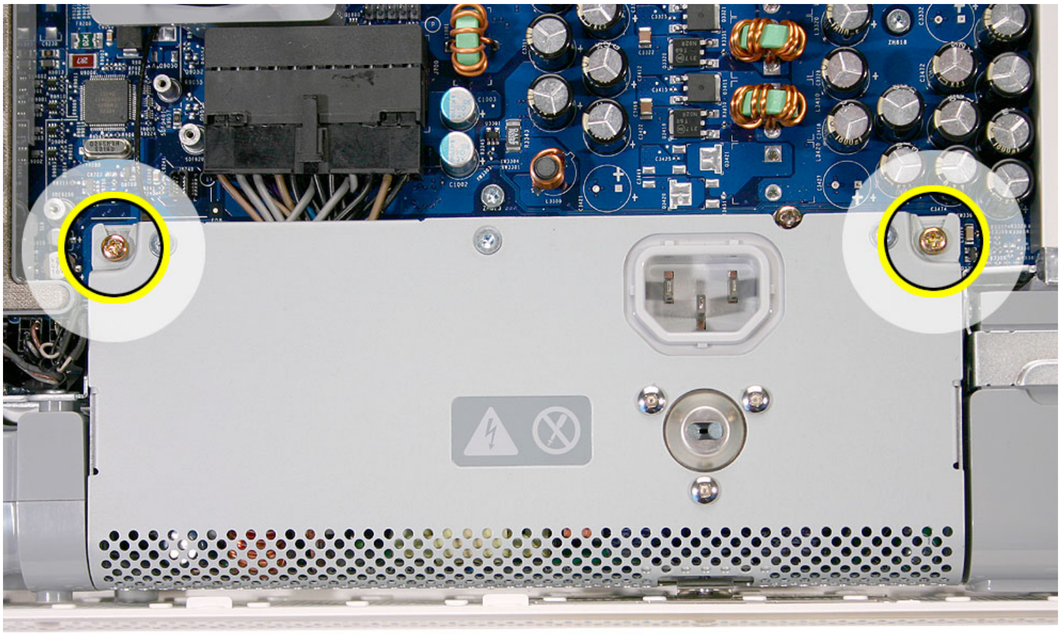
12. Pull the tab on the card to remove the card from the AirPort card guide.



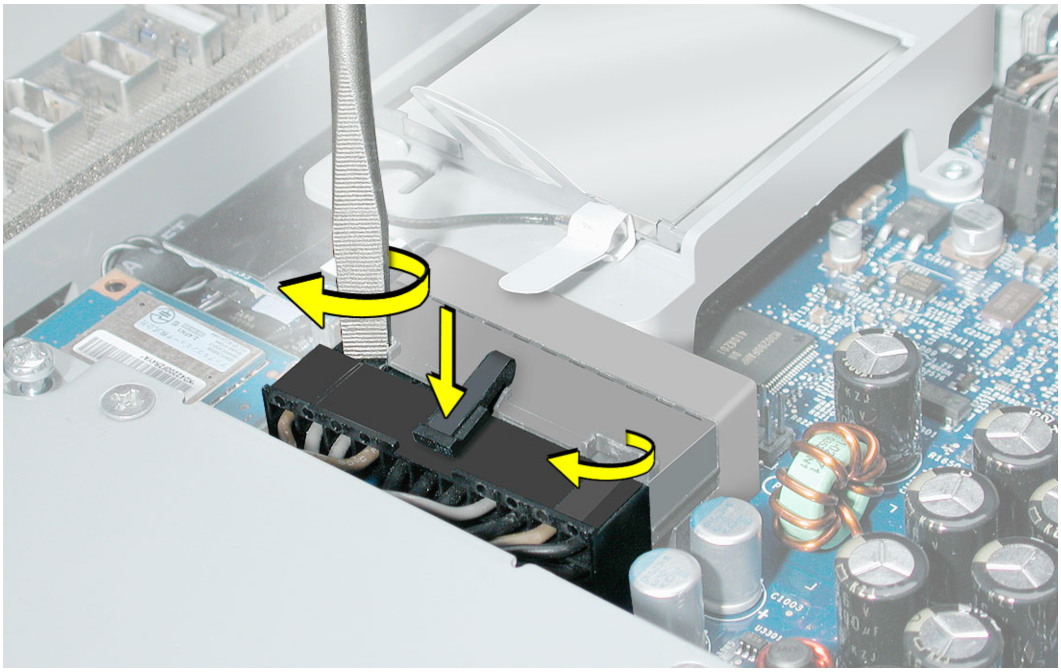
13. Reconnect the antenna cable to the hole on the AirPort card guide.



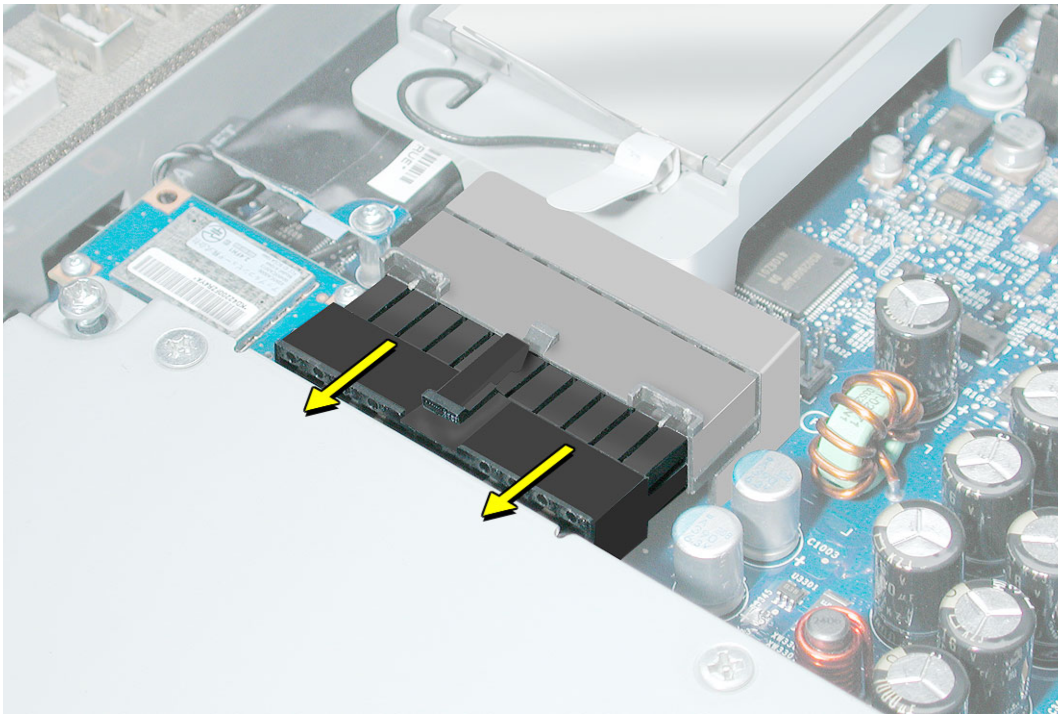
14. Loosen the two outer power supply screws by turning them counterclockwise. **Note:** These screws are captive; they cannot be removed.



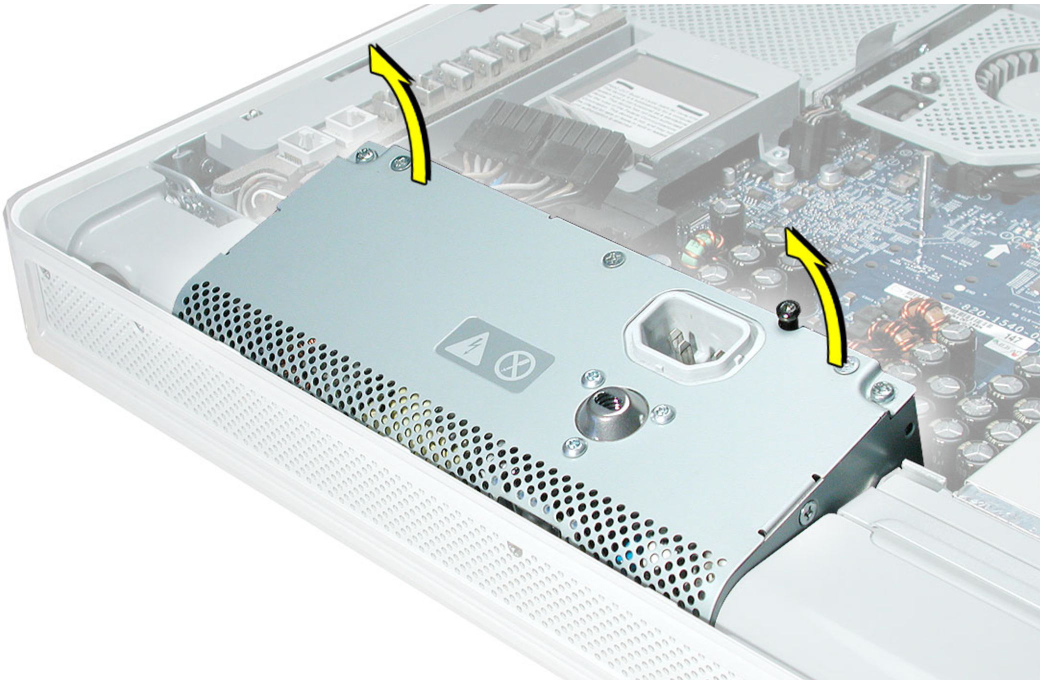
15. Disconnect the power supply cable by pressing the connector release tab and using a wide, flat blade screwdriver to pry apart the connector.



16. Pull the power supply cable out of the connector.

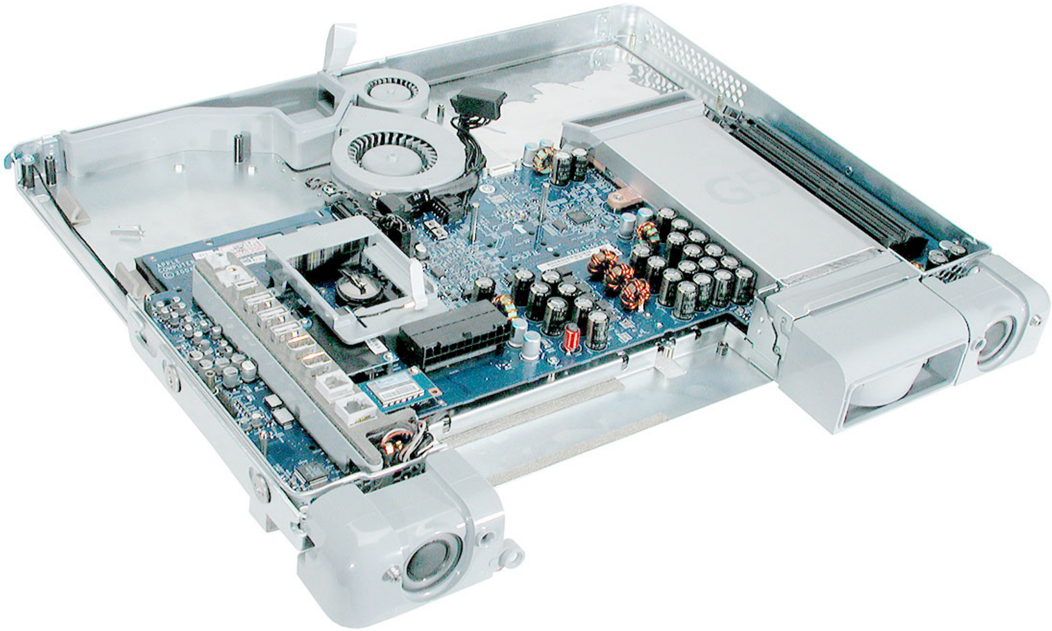


17. Tilt up the power supply until it clears the edge of the main circuit board. Lift it out of the midplane and set it aside. **Important:** Return the midplane to Apple in the packaging provided.



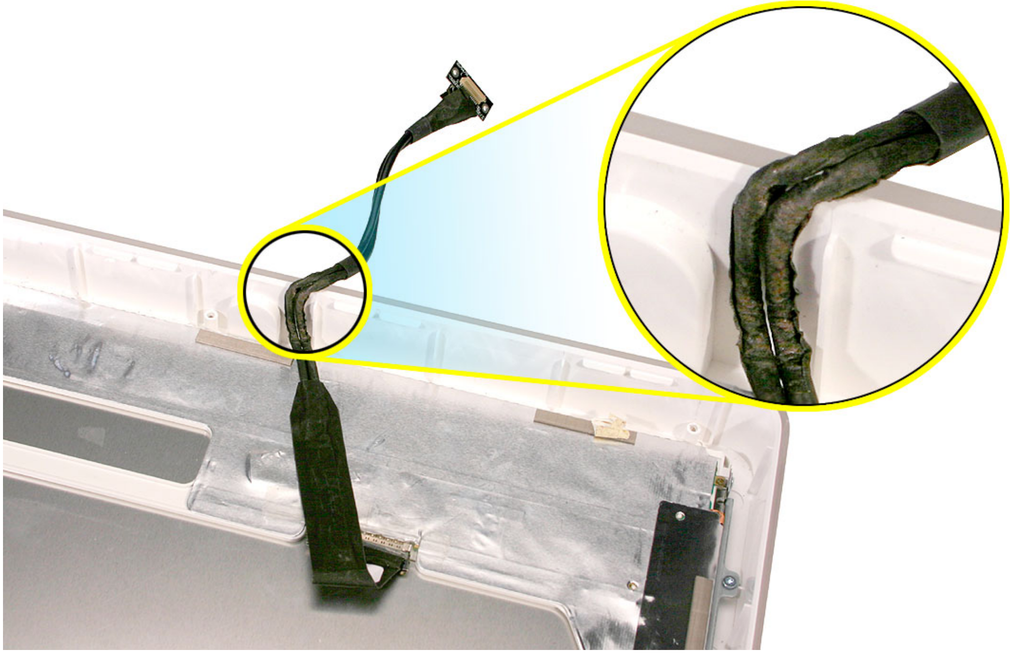
Replacing the Midplane Assembly

1. Remove the replacement midplane from its packaging.

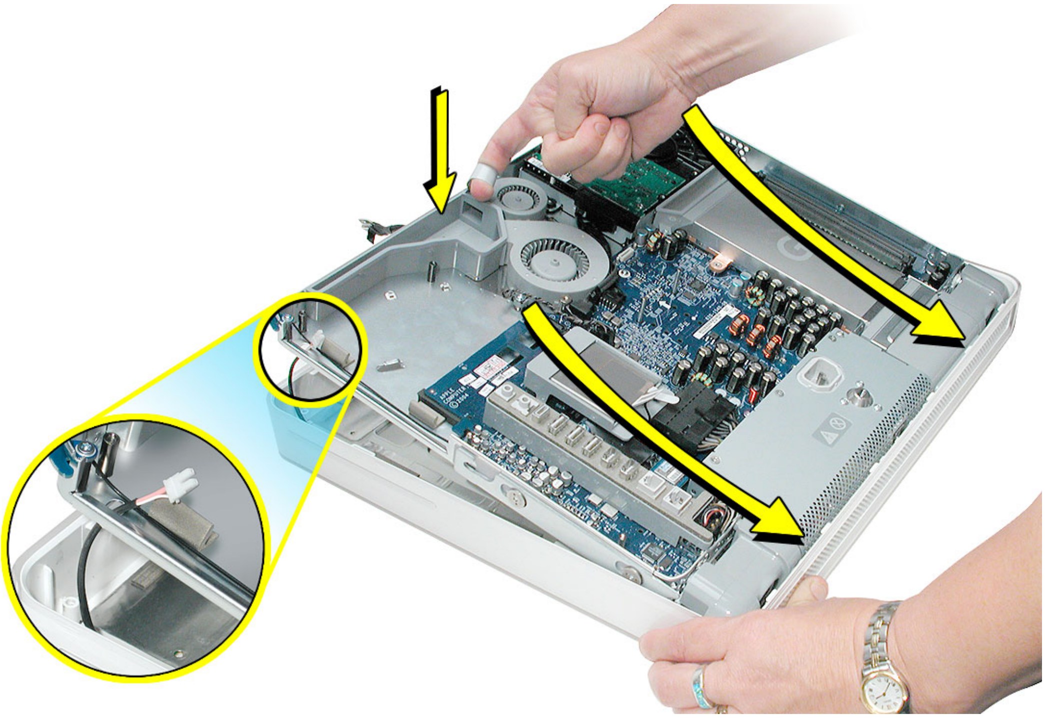


2. Position the display/bezel assembly with the display face down on a clean soft cloth.

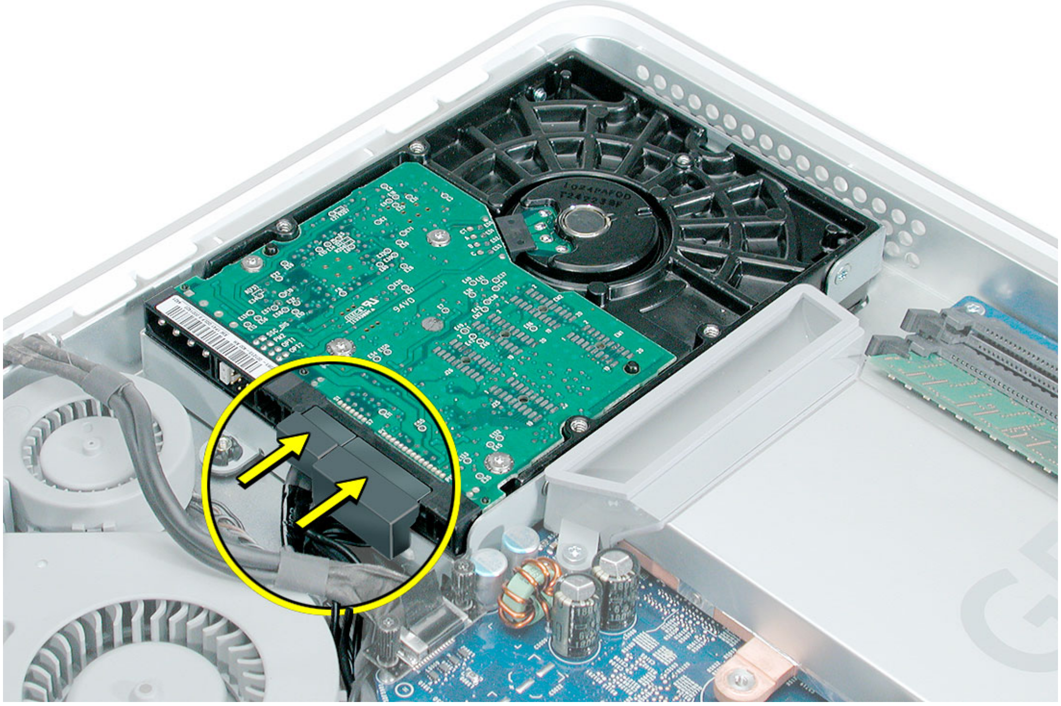
3. Make sure that the black video cable is tucked into the groove on the bezel as shown. A cutout on the midplane chassis lines up with the groove on the display/bezel assembly housing



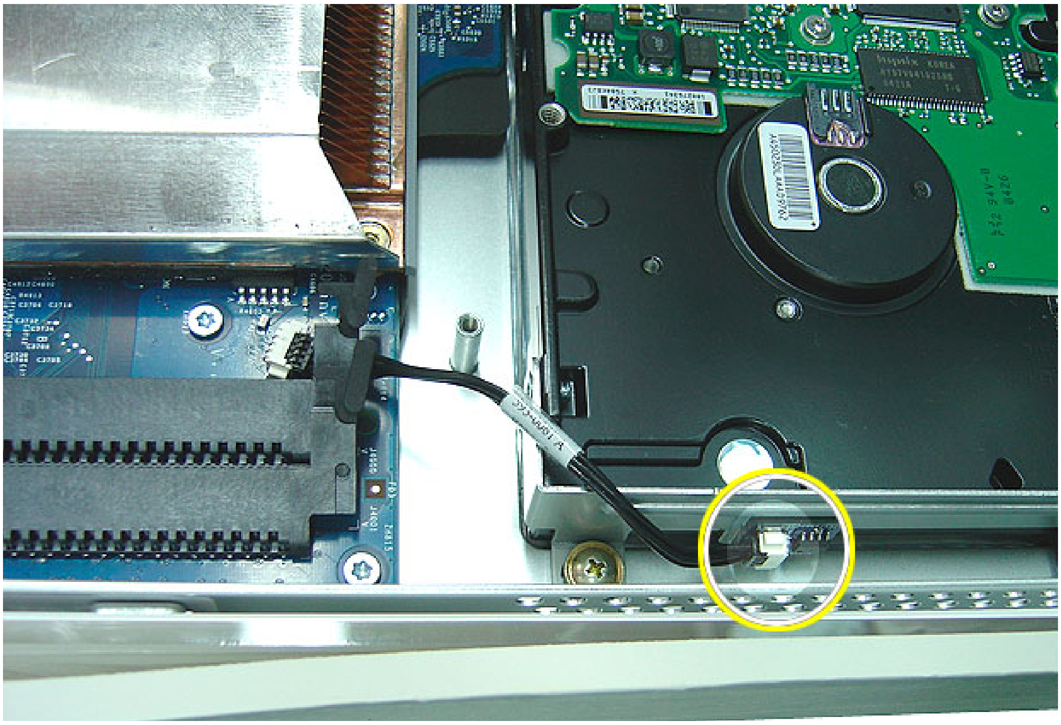
4. Lower the midplane into the display/bezel assembly housing. Use the tab to lower and adjust the midplane into the housing. As you lower the midplane, pull the inverter cable through the opening in the chassis.



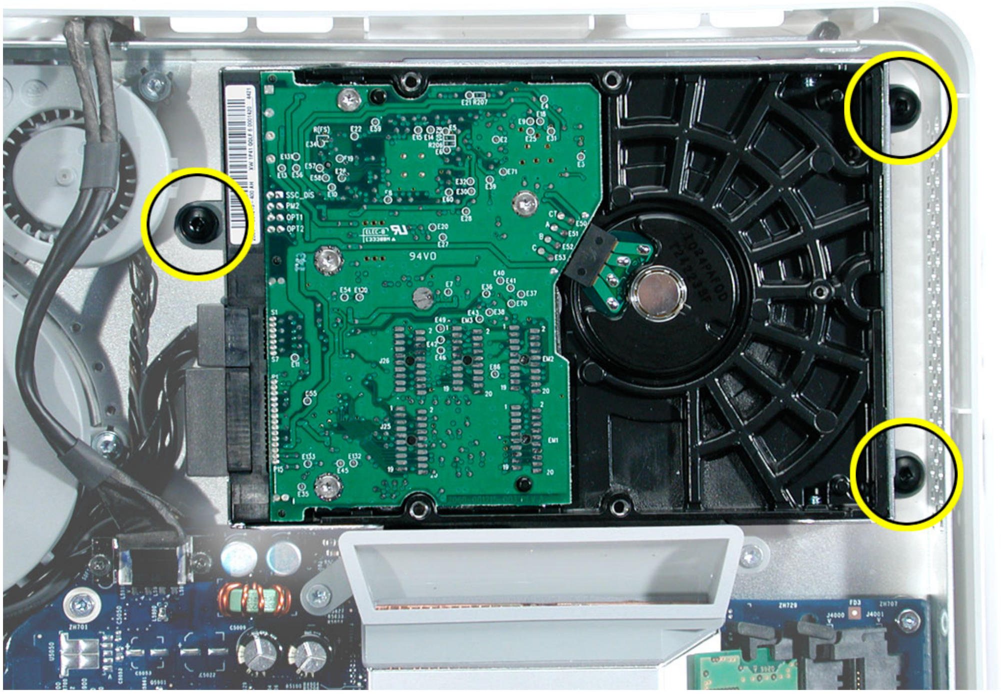
5. Locate the hard drive. Connect the drive data cable and power cable to the hard drive. Lower the hard drive into place on the midplane.



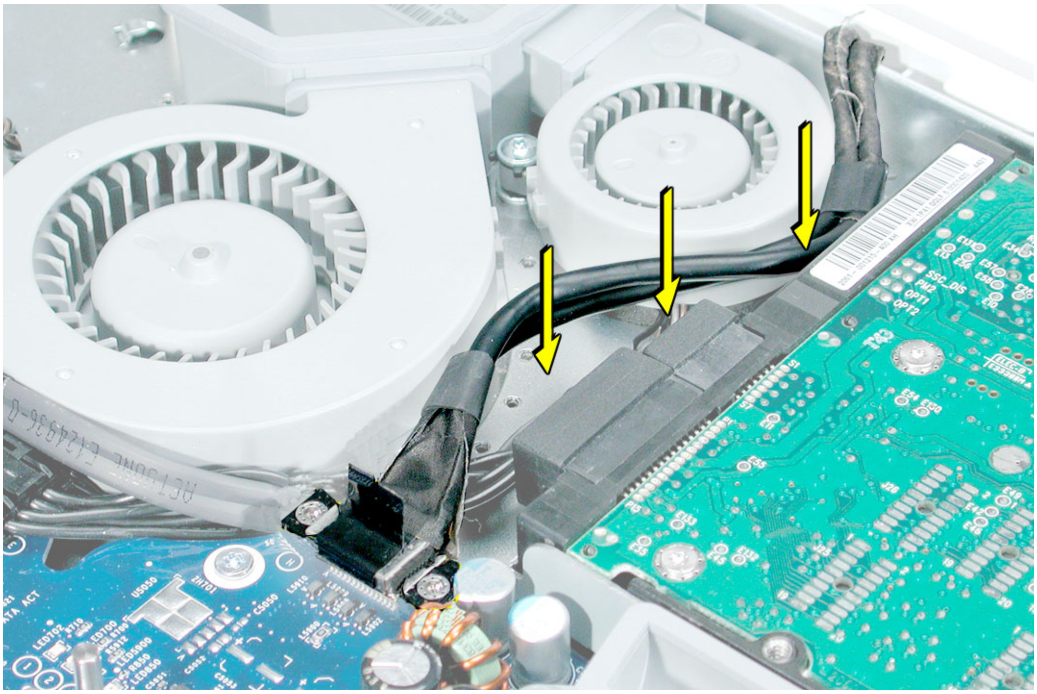
6. Connect the black cable to the white connector on end of the hard drive.



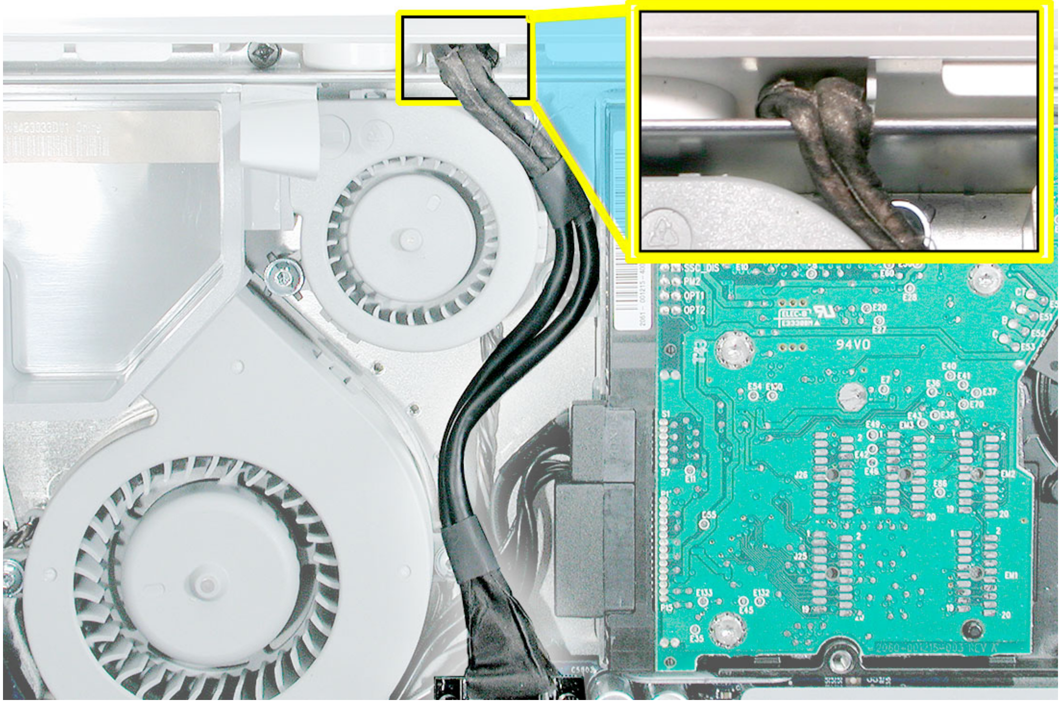
4. Replace the three hard drive screws.



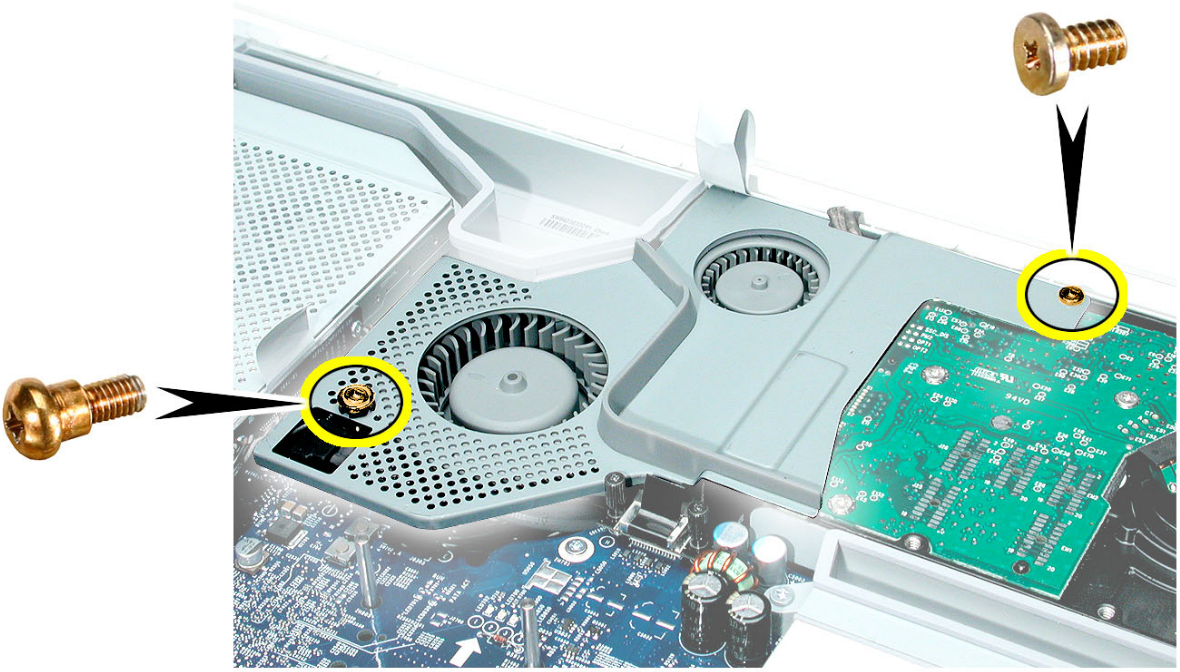
5. Reconnect the video cable and replace the two video cable screws. Tuck the video cable into the area next to the fans (shown by the arrows).



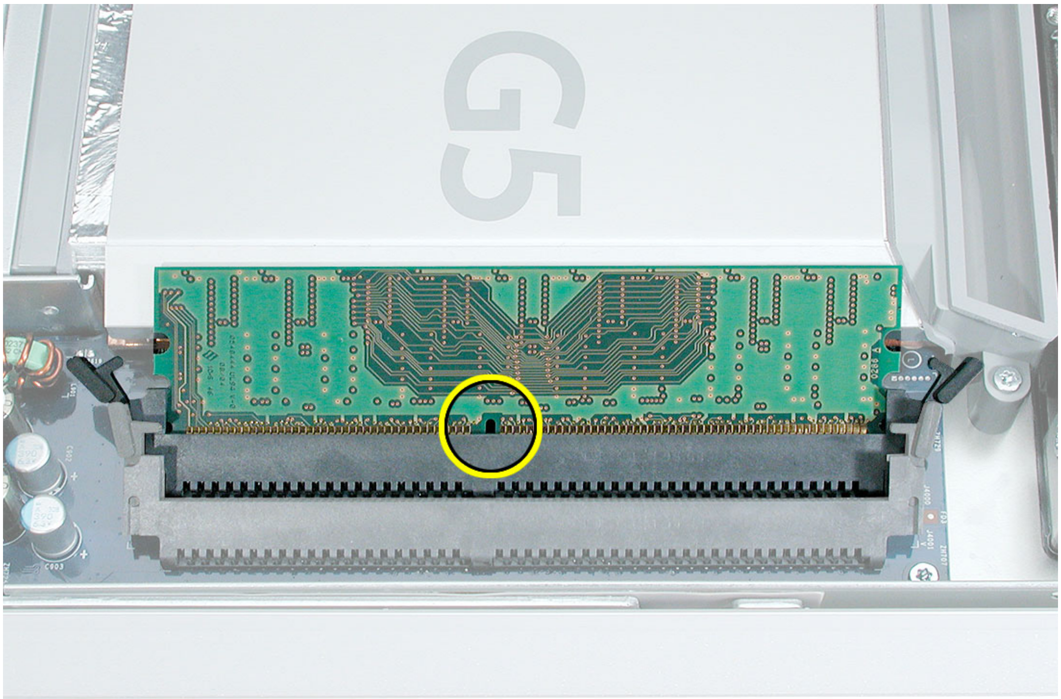
6. Press the top end of the video cable into the notch on the midplane chassis.



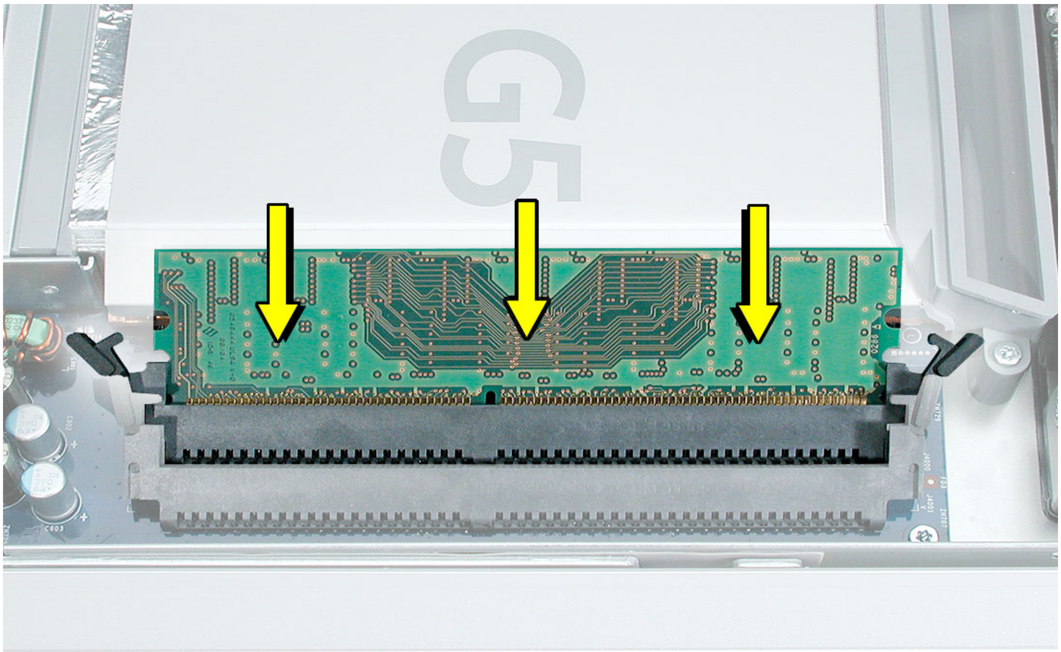
4. Replace the two fan cover screws. The larger screw attaches on the left. **Note:** Make sure the pull tab is sticking up as shown.



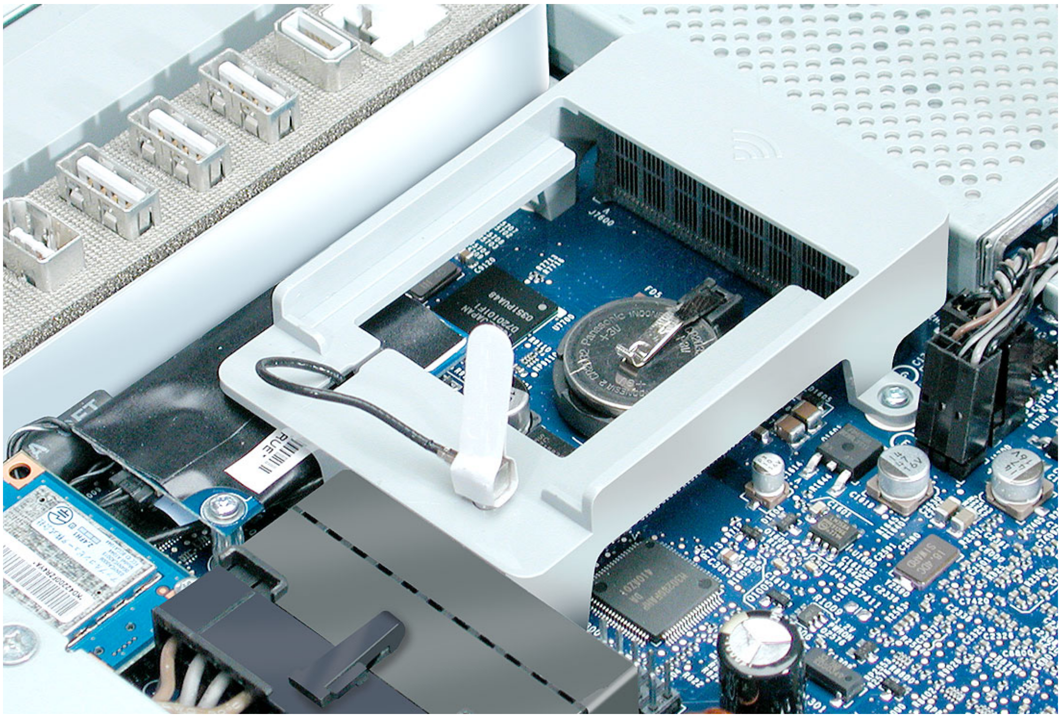
5. Replace the memory module(s) by lining up the notch on the module with the notch on the slot.



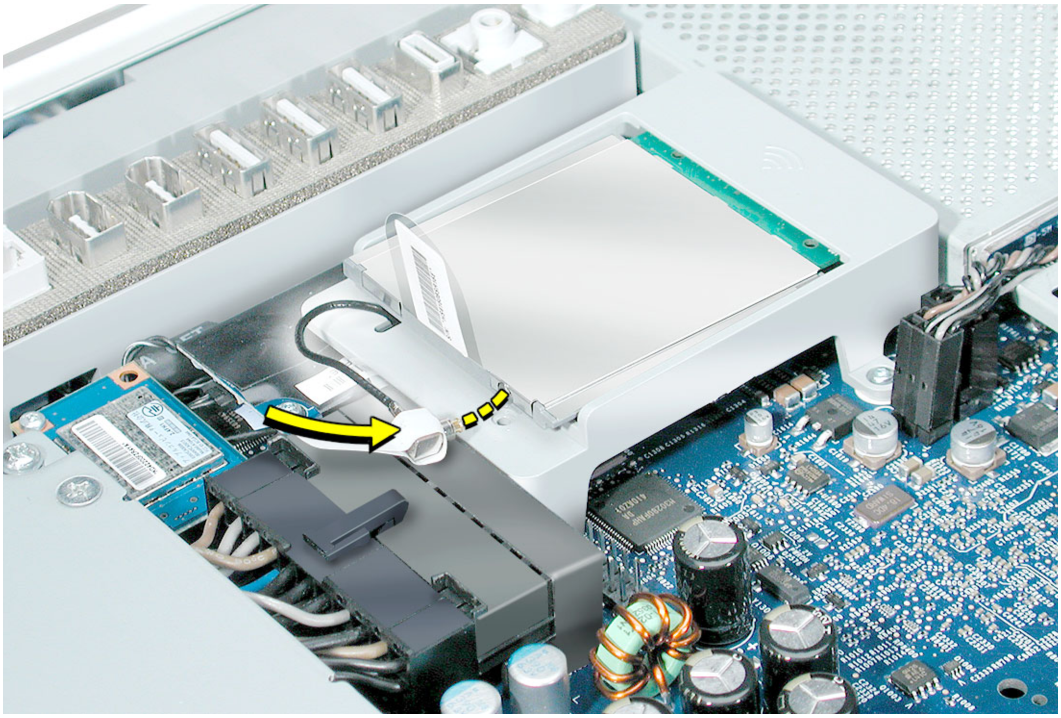
6. Press firmly on the memory module until it clicks into place. Use your thumb and index finger to push the module into the slot



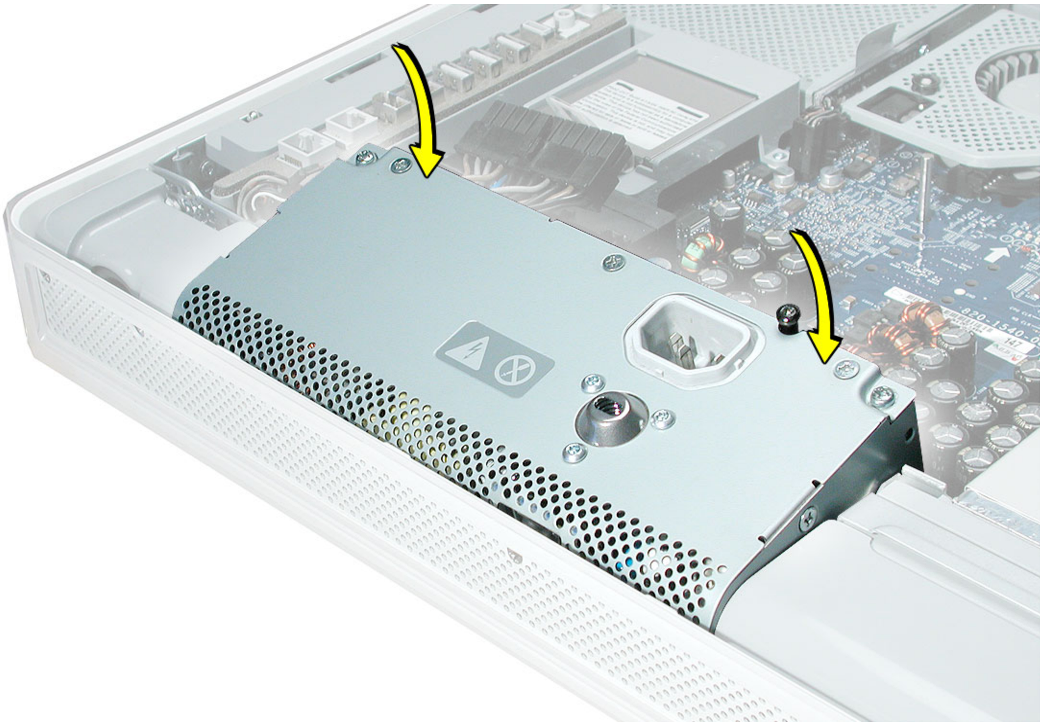
7. Replace the AirPort Extreme card. Remove the AirPort antenna cable (by pulling the tab) from the opening on the AirPort Extreme guide rails.



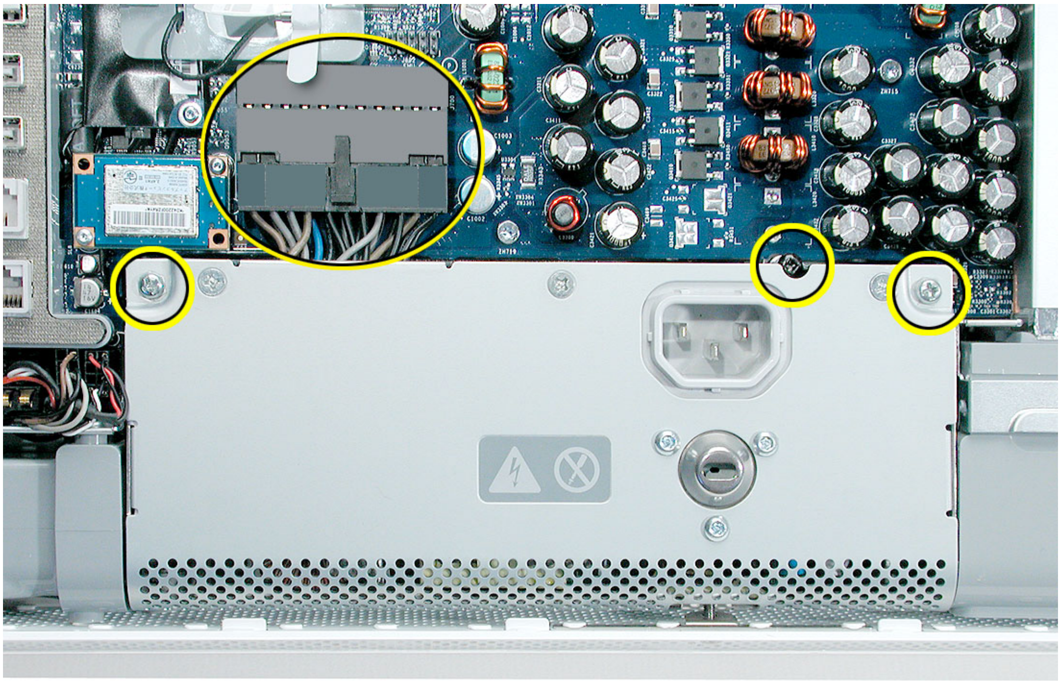
8. Slide the AirPort Extreme card into the slot until it clicks into place. Connect the AirPort antenna cable to the AirPort Extreme card.



9. Lower the power supply into the midplane.

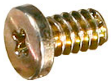


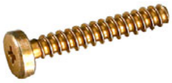
10. Connect the black power supply connector and tighten the three captive screws, turning them clockwise.

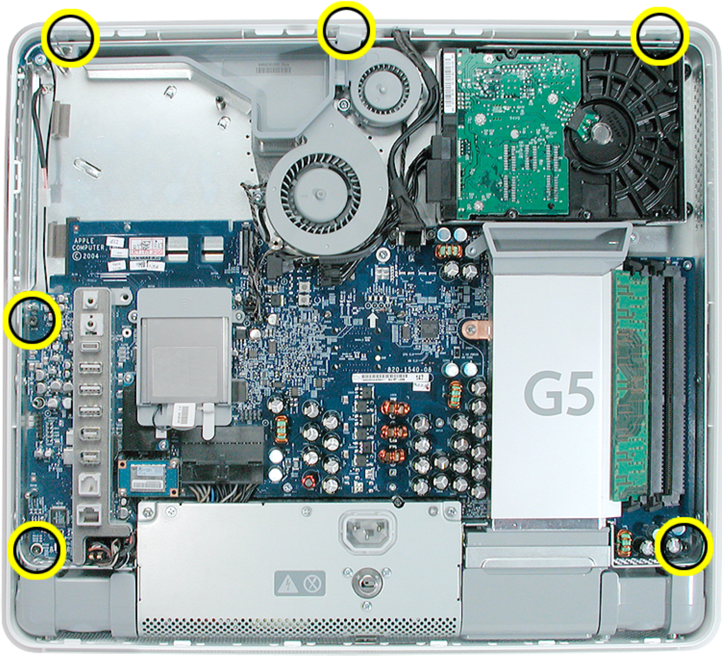


4. Replace the six case screws. (The shorter screws attach along the top.).

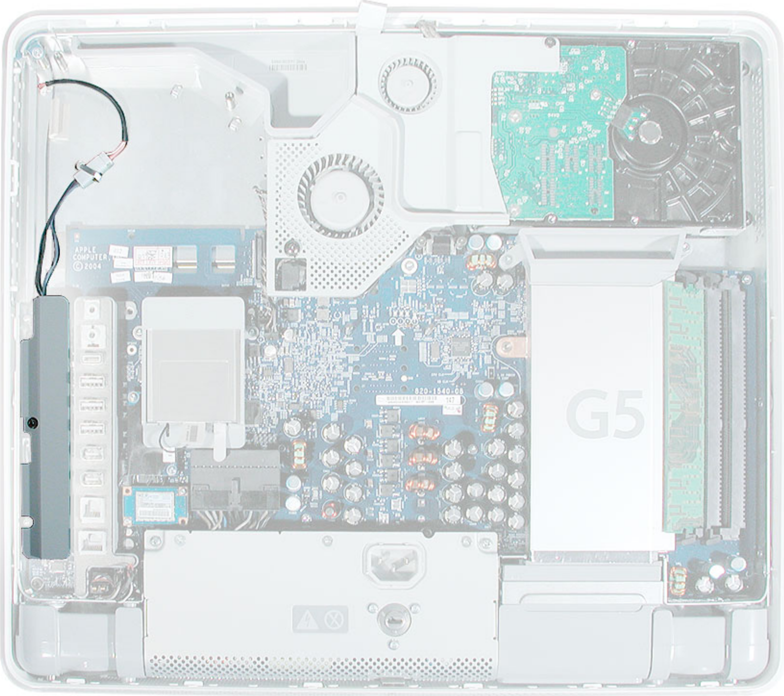
)



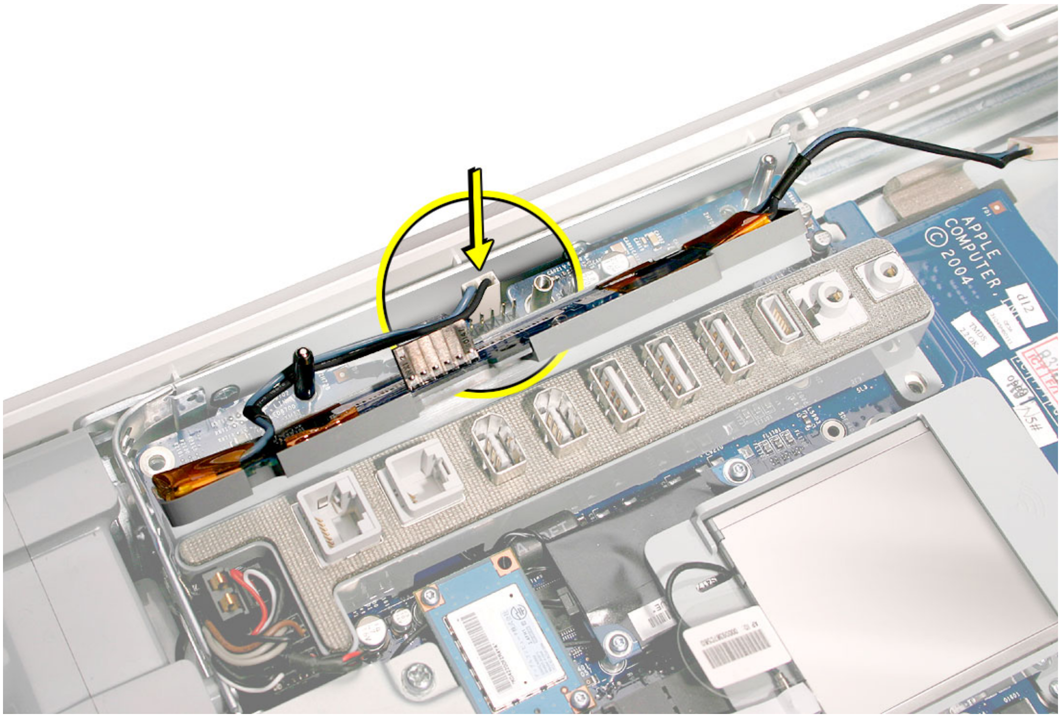




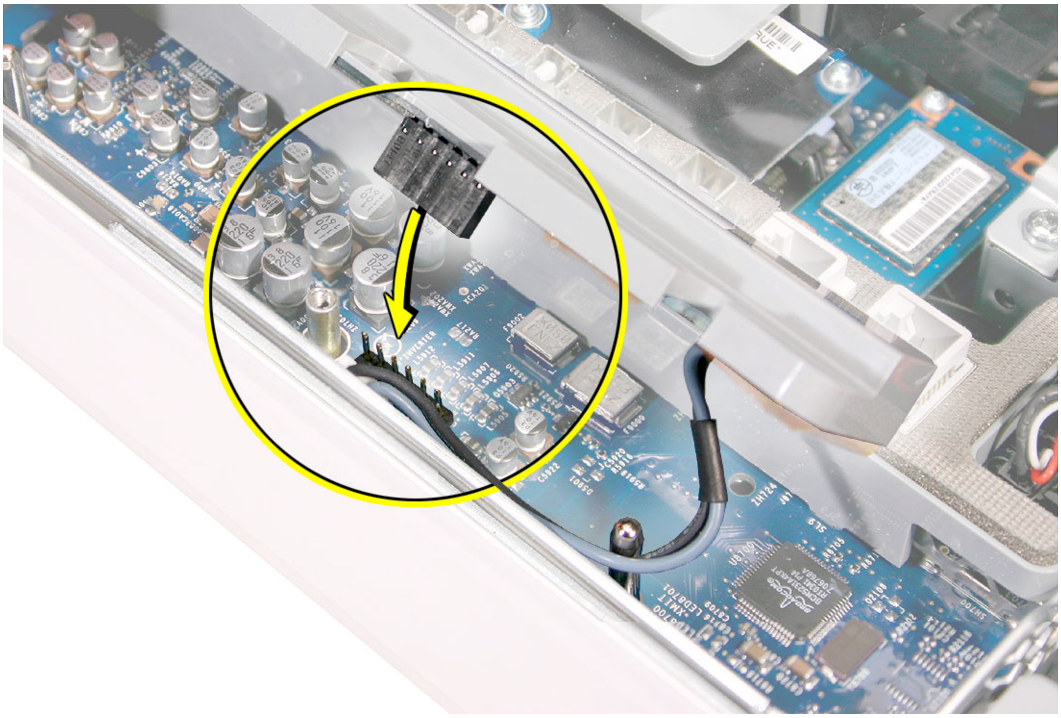
5. Locate the inverter board that you set aside.



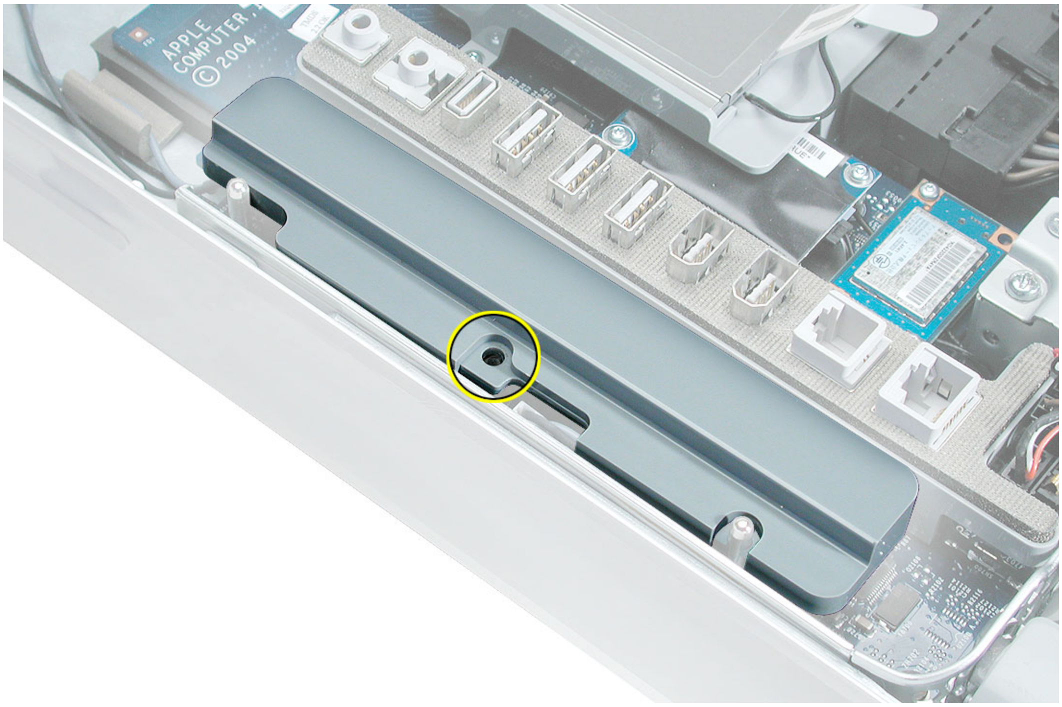
6. Connect the white connector on the inverter board to the main board. Route this cable around the silver post (as shown). **Caution:** Be careful not to bend the pins or prick your fingers on the pins located next to the white connector.



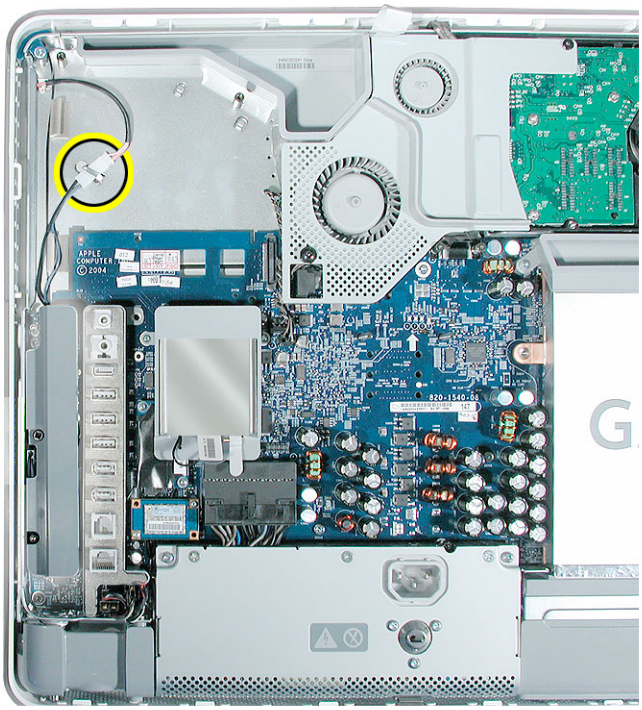
7. As you lower the inverter into place, connect the black connector to the pins on the board. Use the tall silver pins as a guide to align the inverter. **Important:** Make sure the connector mates with the pins. Double check that it's connected.



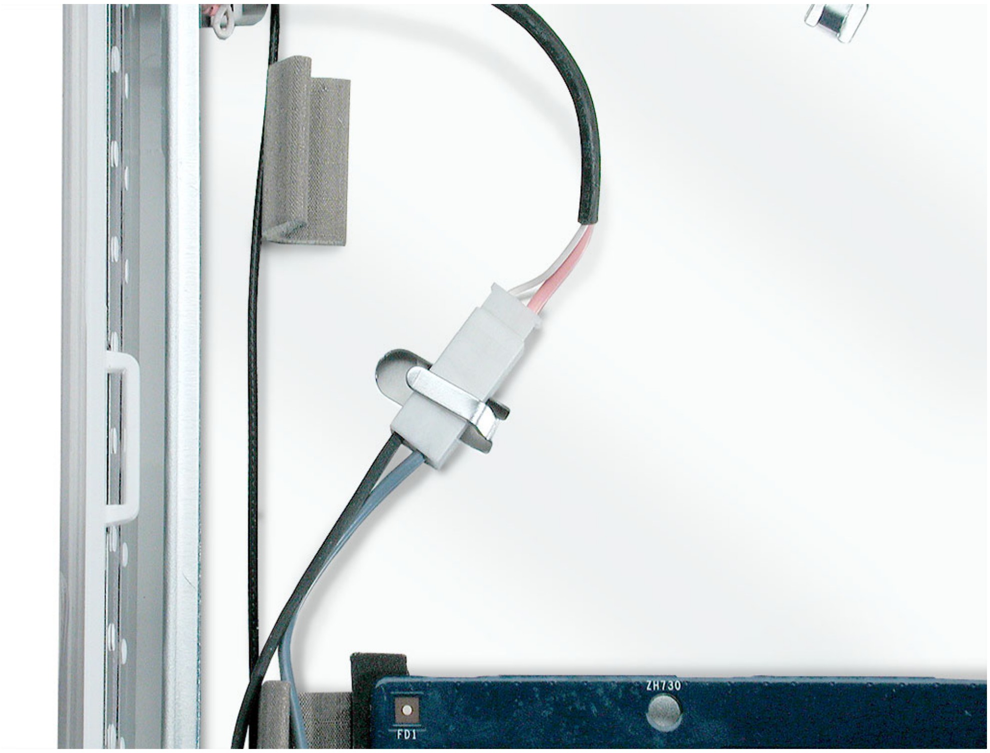
4. Replace the inverter screw..



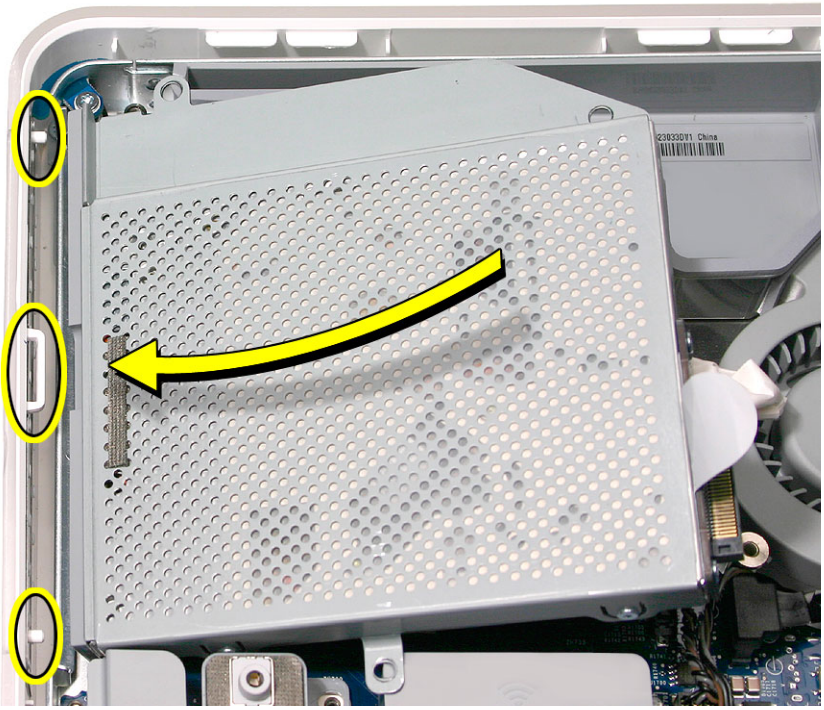
5. Reconnect the inverter-to-display panel cable. **Important:** The connector is keyed (it fits together only one way).



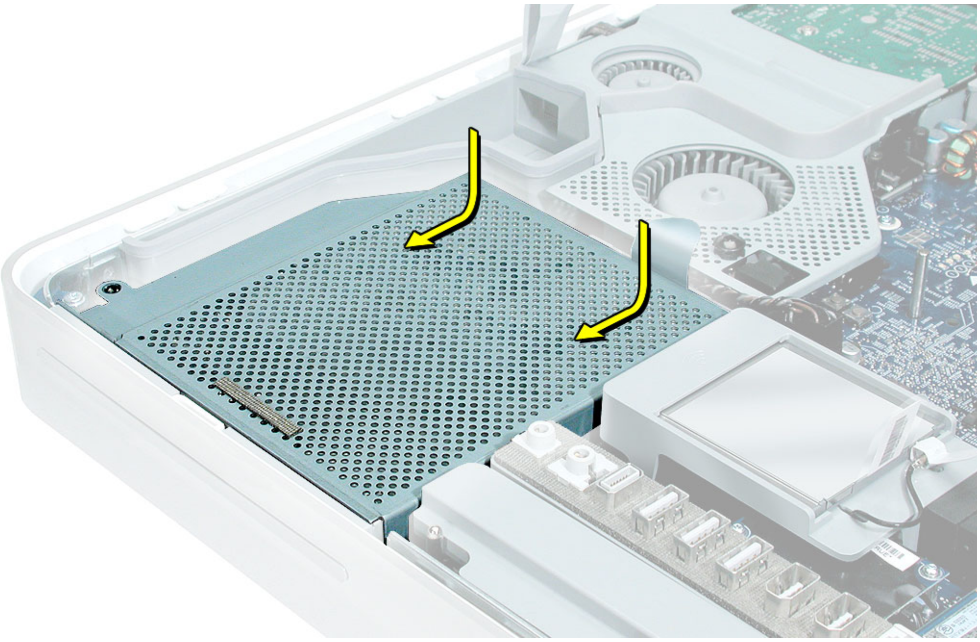
6. Secure the connector under the metal tab.



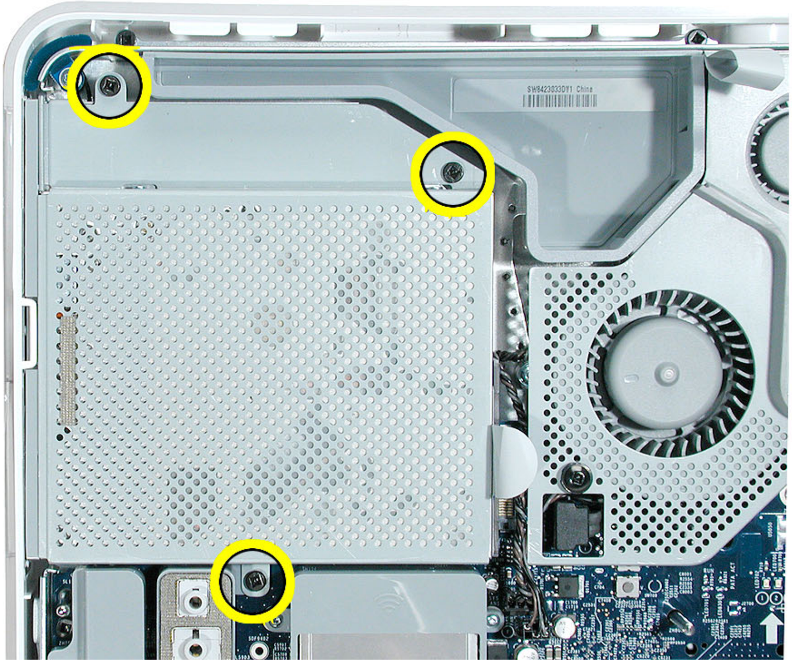
7. Locate the optical drive that you set aside. Holding the optical drive by the back end (near the tab), insert the drive at an angle to mate the two white pins and the plastic rectangle with the two holes and notch on the optical drive.



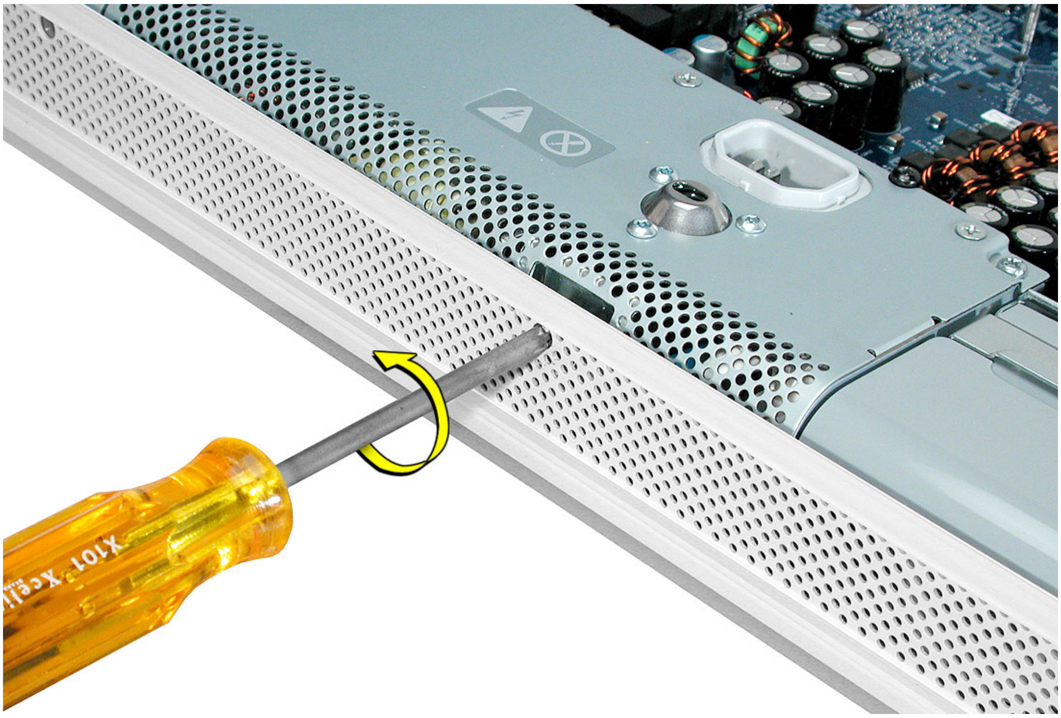
8. With your thumb on the tab and your index finger behind the tab, push the drive forward and down. The optical drive should click into its connector. **Note:** If the optical drive won’t click into place, check that the fan cables are not obstructing the optical drive connector.



4. Replace the three optical drive screws.



5. Turn the middle case screw counterclockwise about five revolutions. This step prepares the back cover to be installed and secured.



Midplane Assembly, No Optical

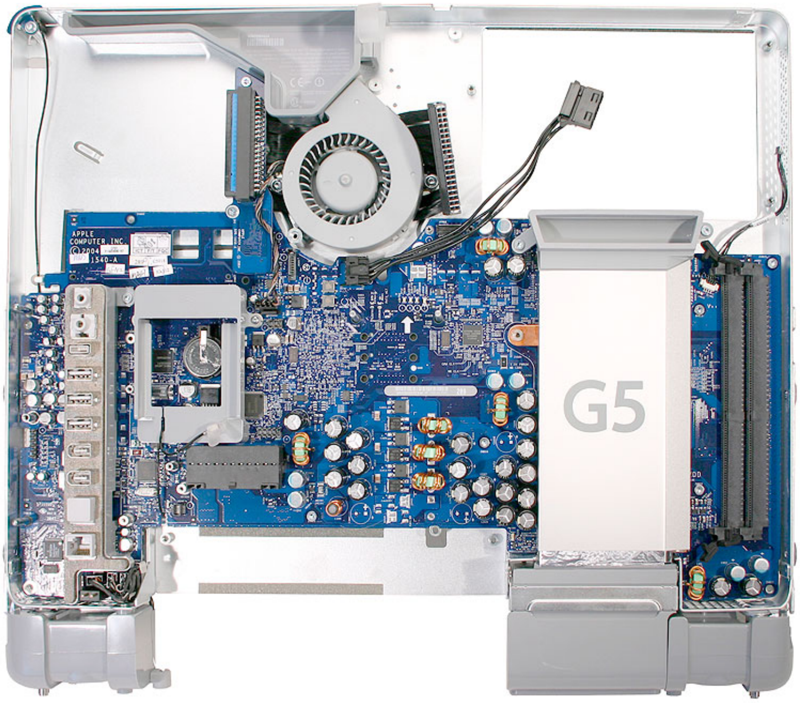
Tools Required

- Use the screwdriver provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Flat blade screwdriver
- Screw tray or equivalent to hold the screws

Preliminary Steps

Before you begin, remove the cover.

Part Location

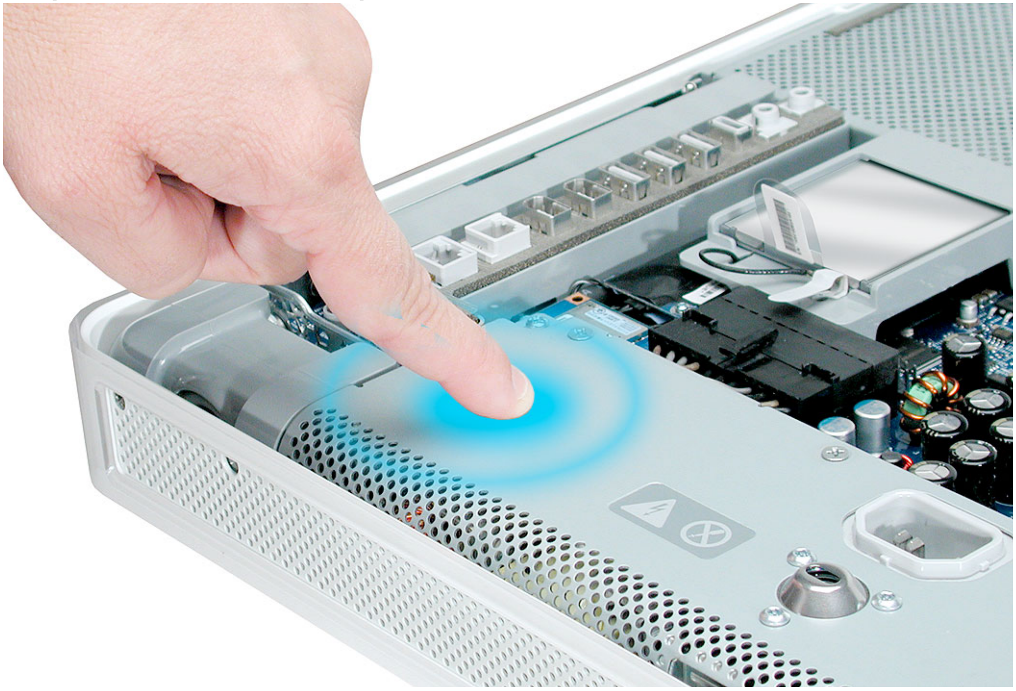


Removing the Midplane, No Optical

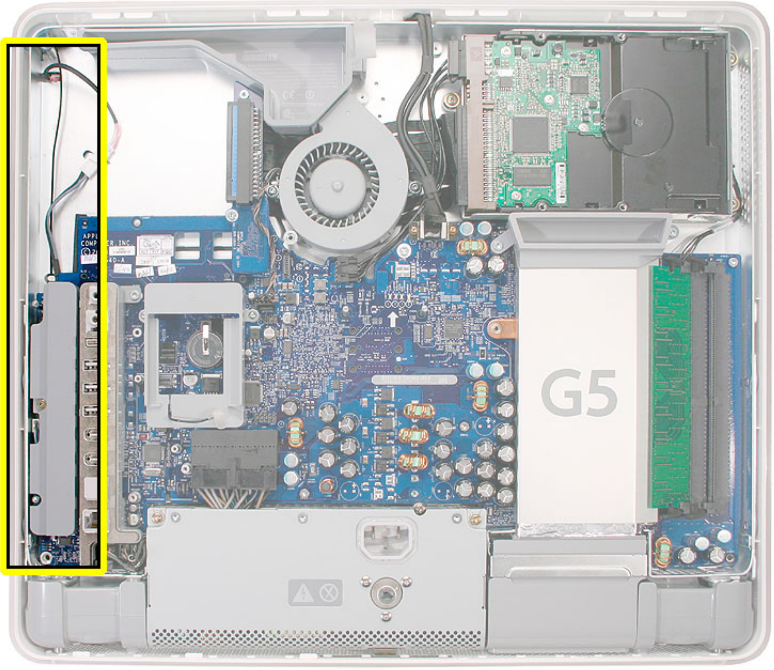
1. To access the midplane assembly you must first remove other service modules. This procedure will show you how to remove and replace these modules. **Note:** As you remove each module, set it aside, along with the screws for that module.

2. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

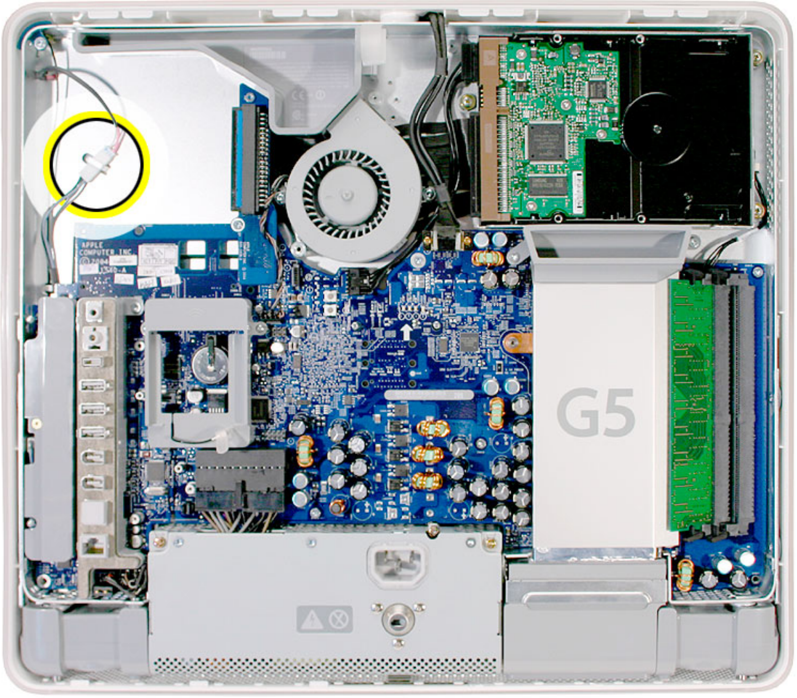
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



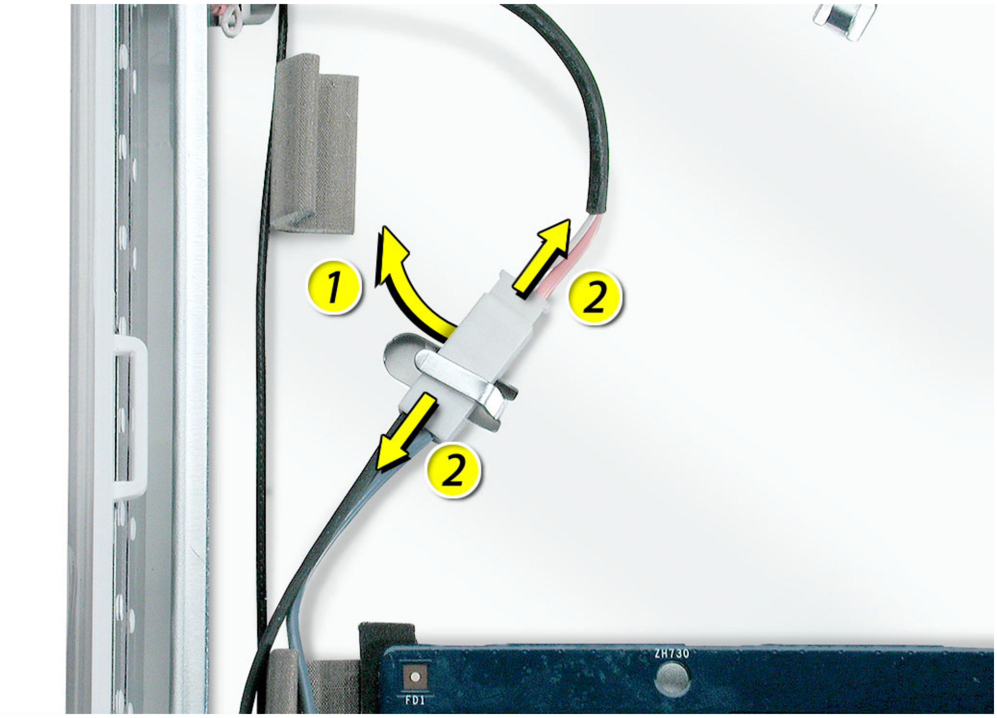
3. Locate the inverter on the left side of the computer.



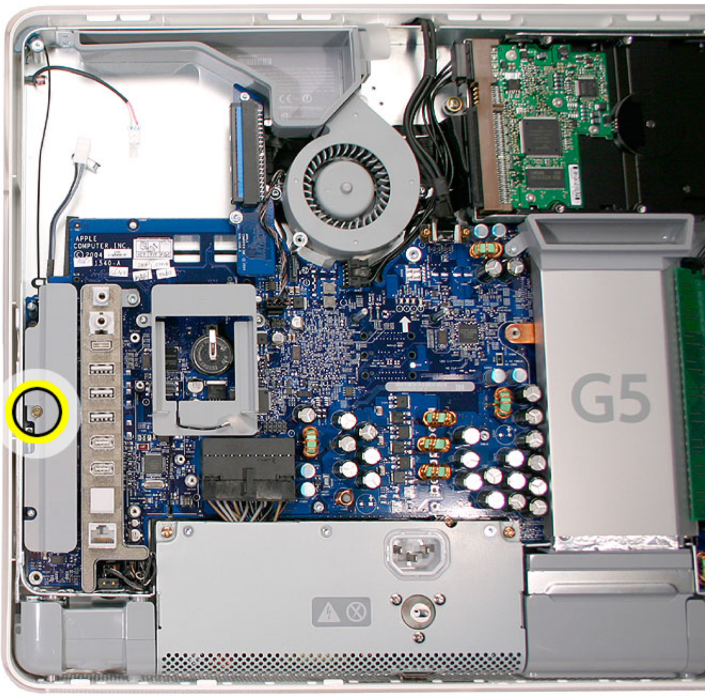
4. Locate the inverter-to-display panel cable connector.



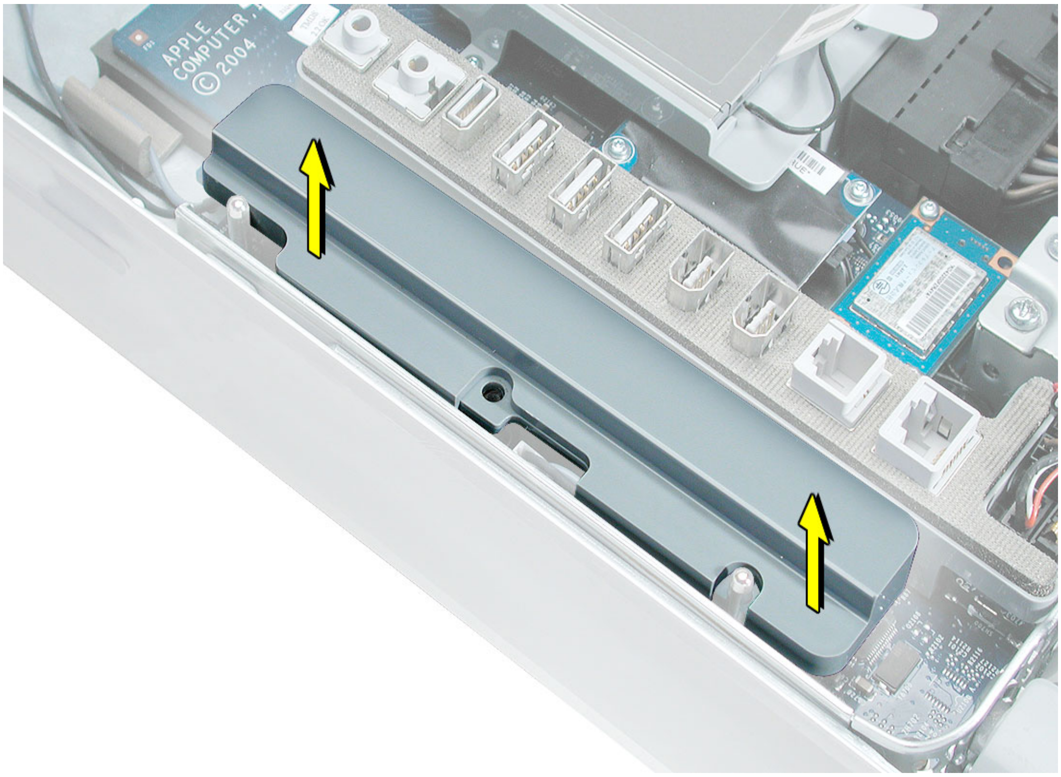
5. Release the cable from the clip. Disconnect the cable connector.



4. Using the tool provided, or a Phillips #1 screwdriver, remove the inverter screw.

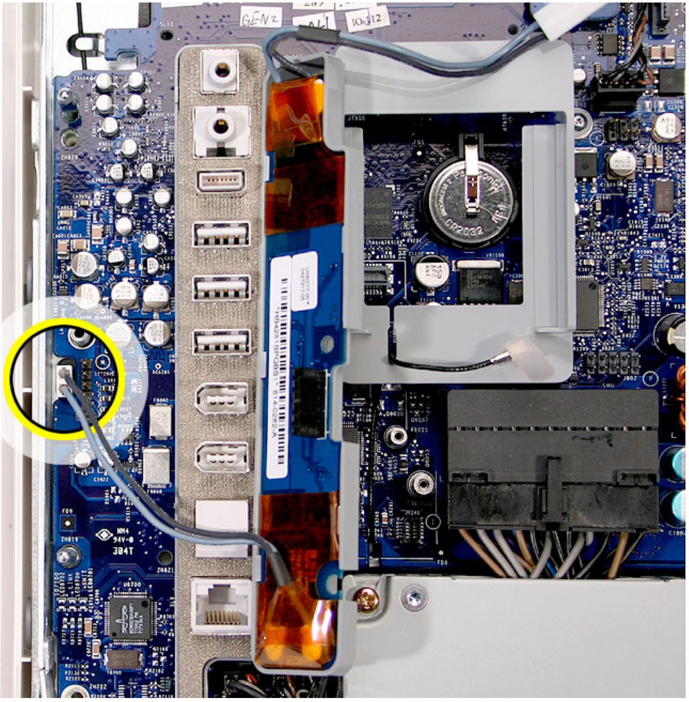


5. Lift the inverter straight up to disconnect the inverter board.

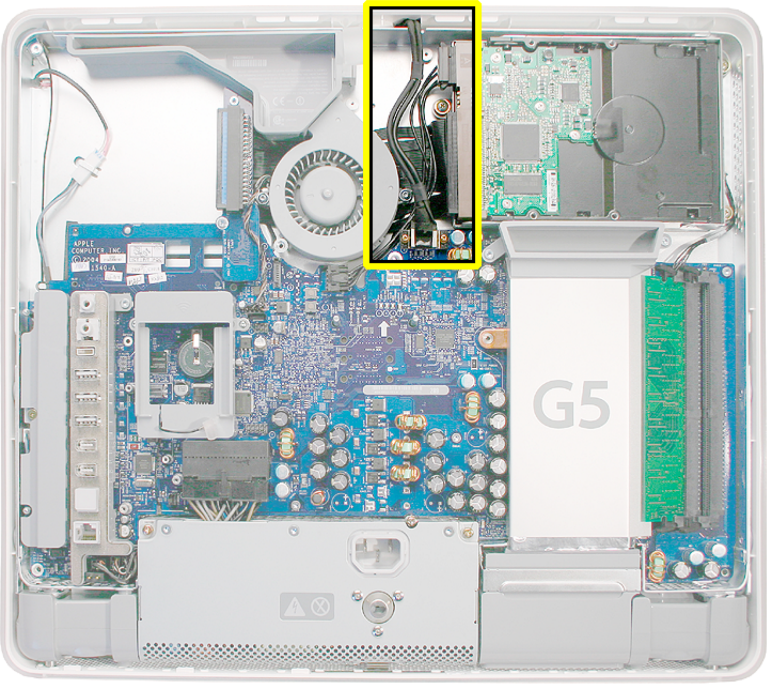


6. Disconnect the white connector (circled below) on the inverter by pulling it straight up. Set the inverter board aside.

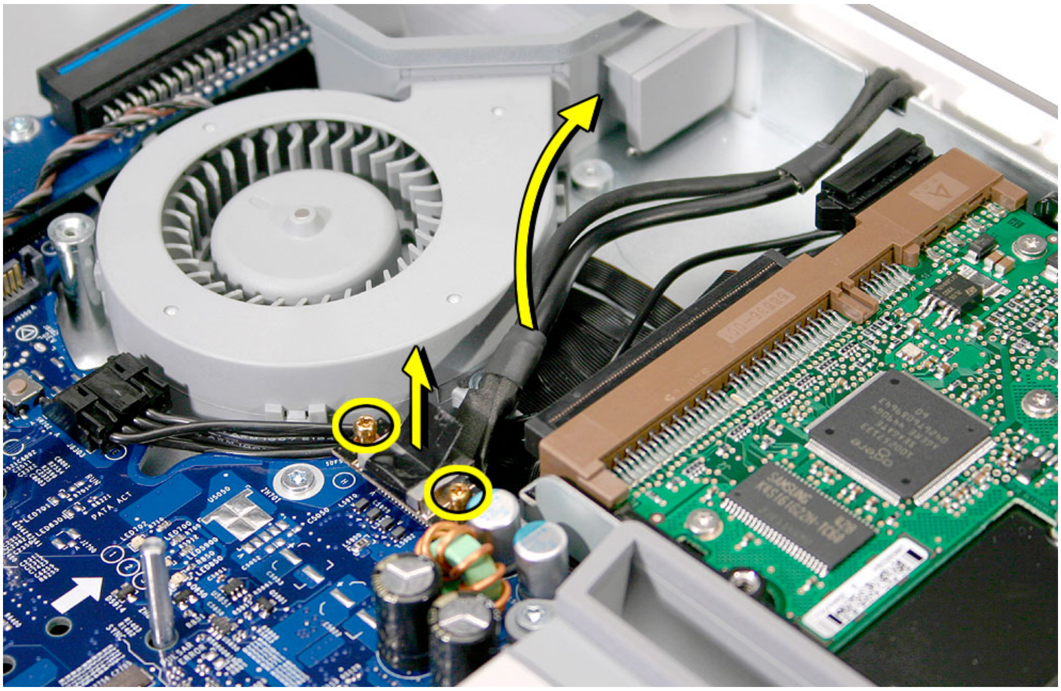
   Note: Be careful not to prick your fingers on the pins next to the white connector.



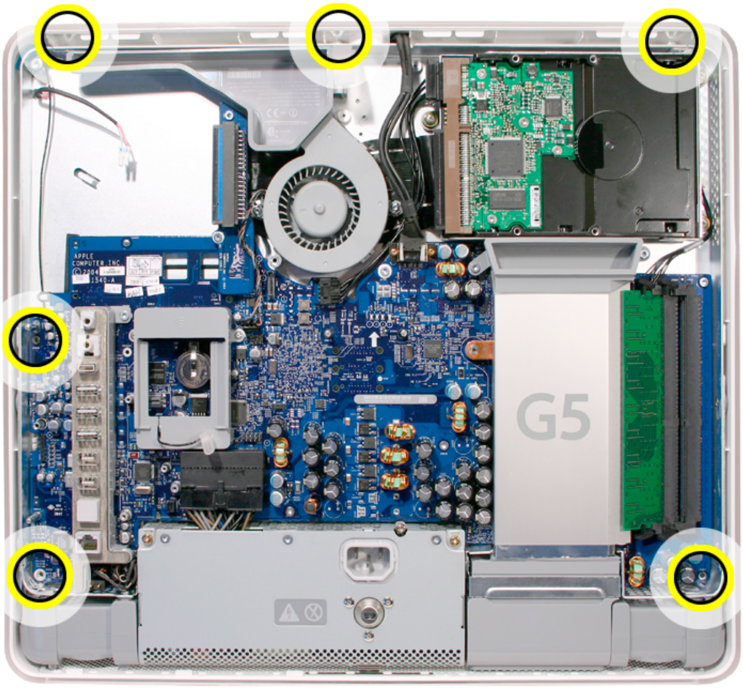
7. Locate the black video cable at the top of the computer.



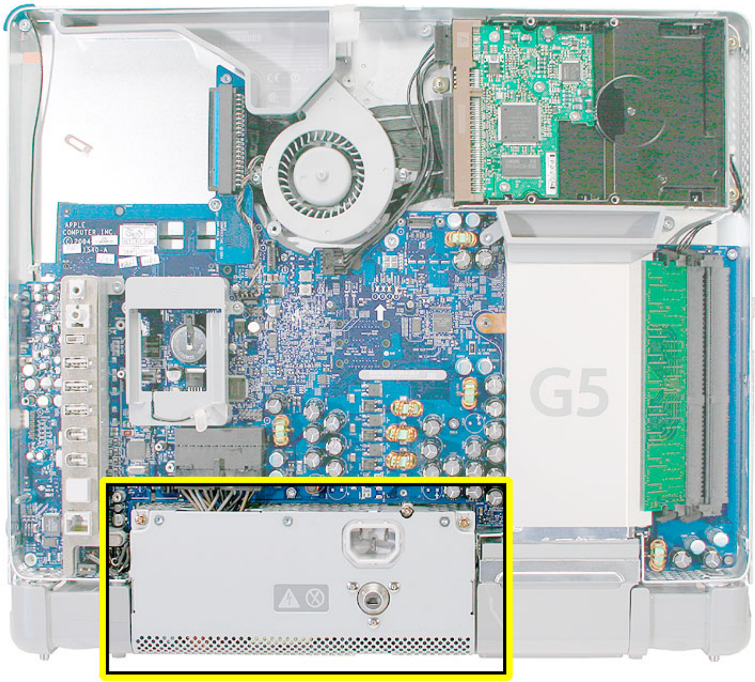
4. Remove the two screws on the video cable and set them aside. Pull up on the black tab to disconnect the cable. Flip the cable back, so it is out of the way..



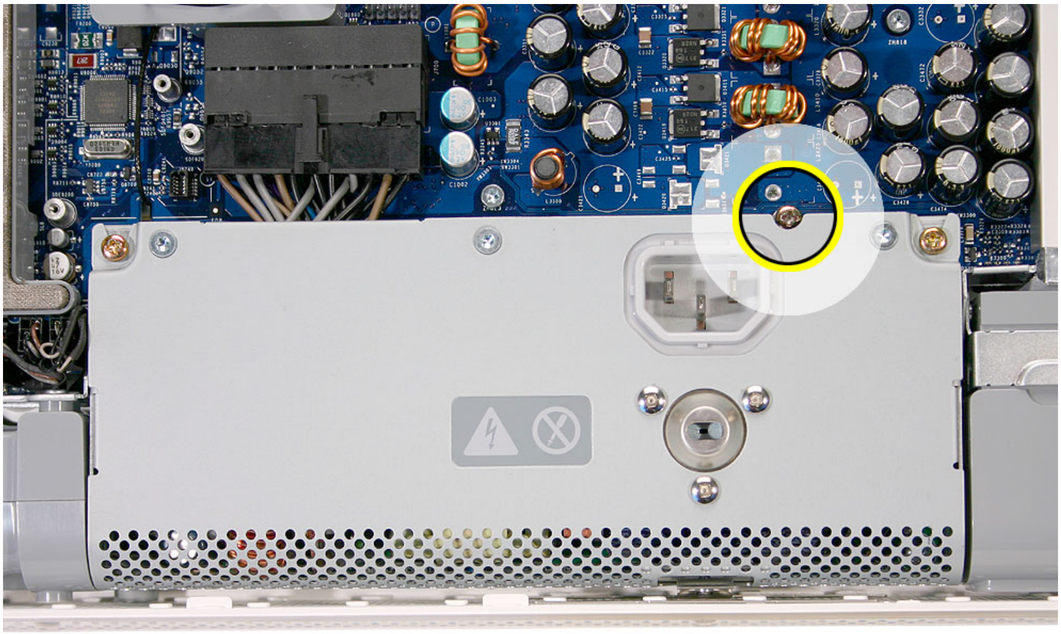
4. Using the Phillips screwdriver, remove six screws that attach the midplane to the display panel housing. Three short screws are located along the top of the case and the longer screws attach on the midplane board. Set the screws aside..



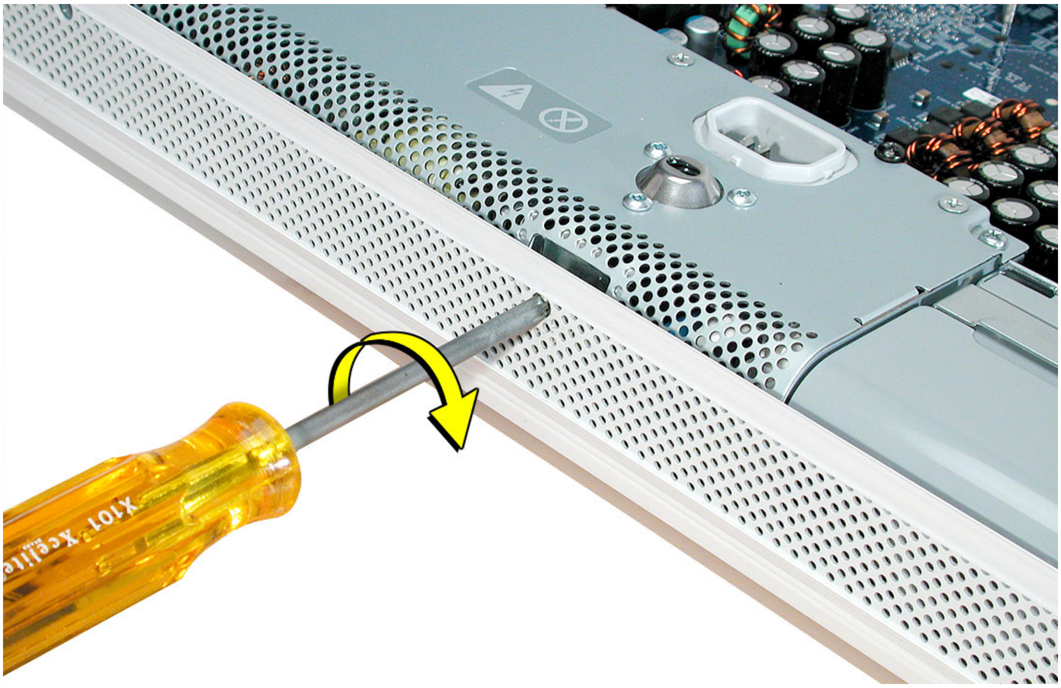
5. Locate the power supply at the bottom of the picture below.



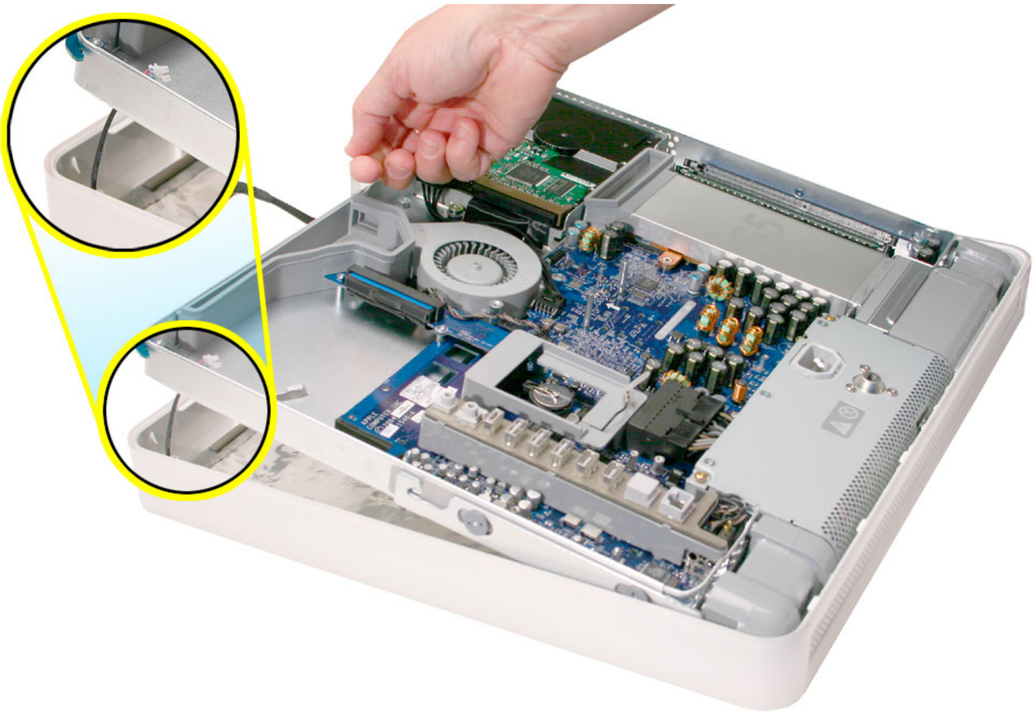
6. Loosen the captive power supply screw (circled below) by turning it counterclockwise. Loosen the screw until it is flush with the top of the power supply. The screw is captive; it will not come out. **Note:** You do not need to remove the power supply yet.



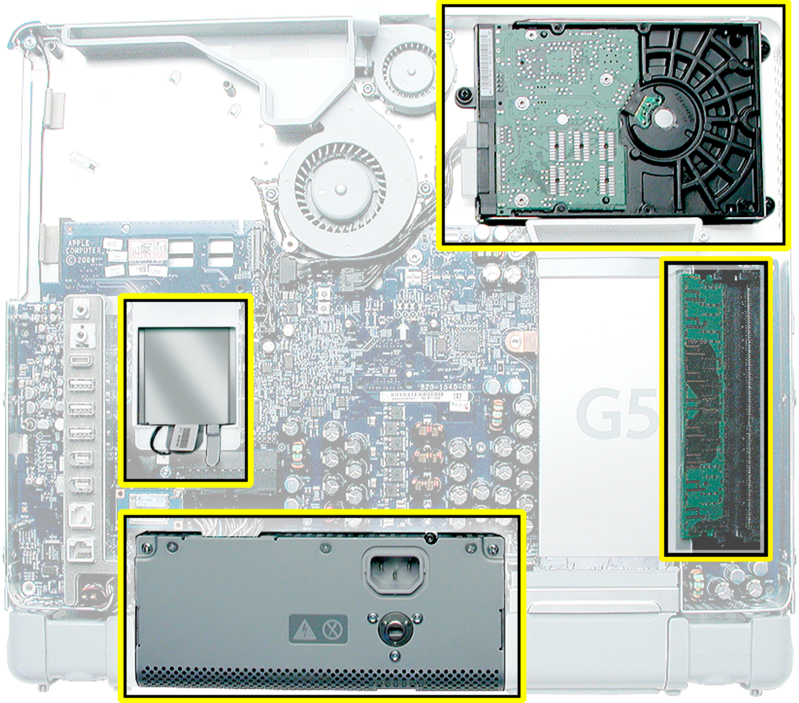
7. Turn the middle case screw clockwise about five revolutions. This releases a screw clamp that holds the power supply in the display/bezel assembly.



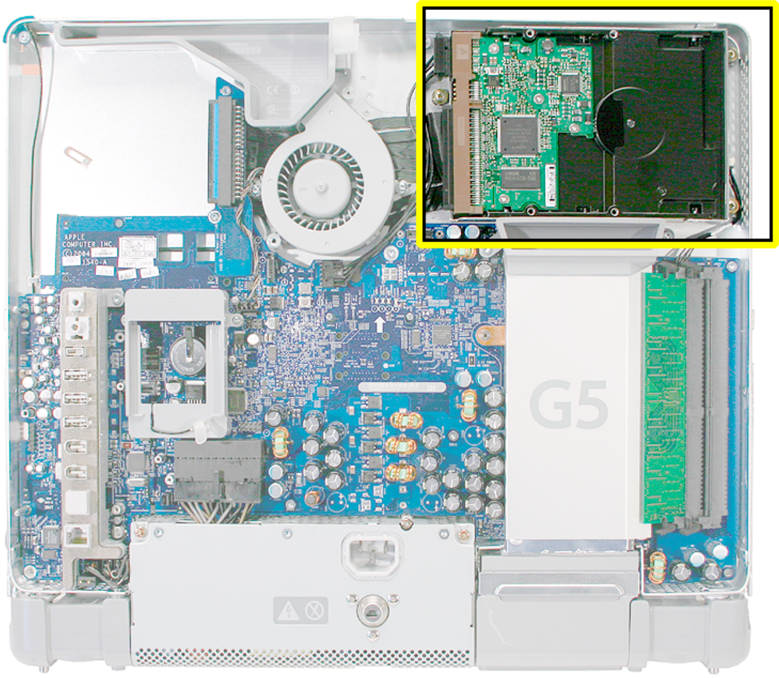
8. Locate the pull tab at the top of the computer. Pull the tab up to release the midplane assembly from the display/bezel. Pull the inverter cable (in the top left corner) down through the opening in the midplane. Set the midplane aside.



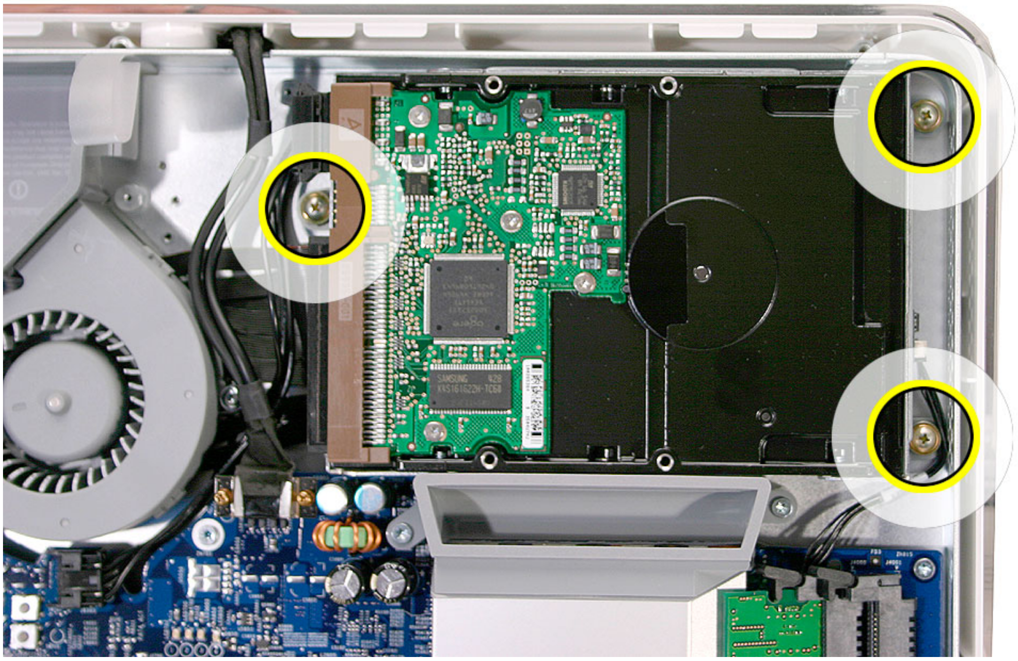
9. **Important:** Remove the highlighted parts from the midplane (hard drive, memory, power supply, and the AirPort Extreme card if it is installed) before retuning the it to Apple. Continue with the procedure for removal instructions.



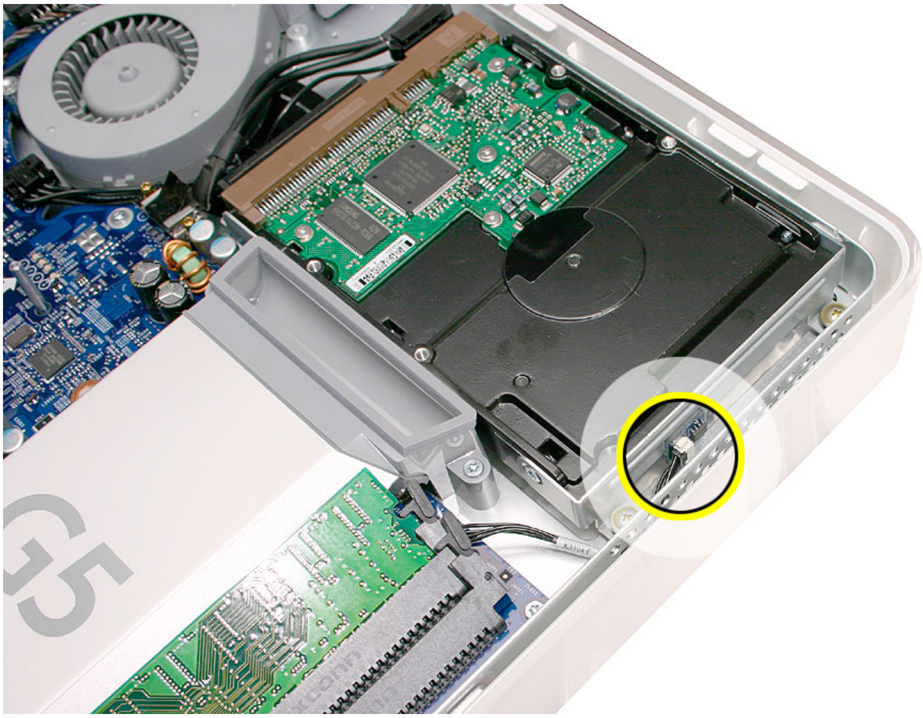
10. Locate the hard drive in the top right corner.



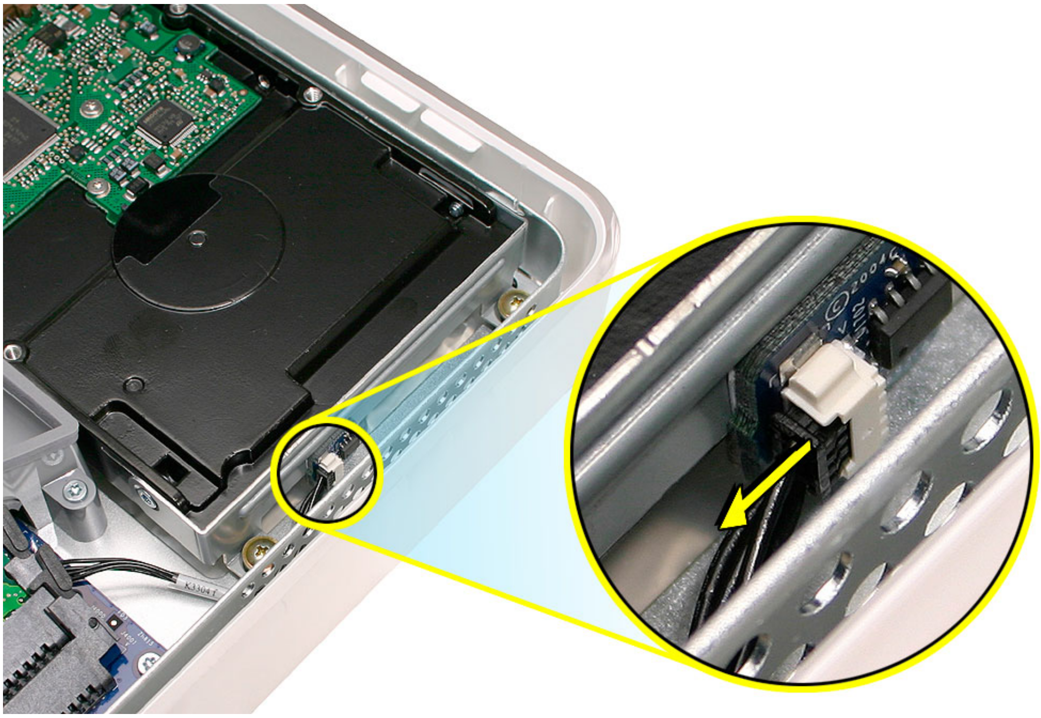
4. Remove the three hard drive screws. Set the screws aside.



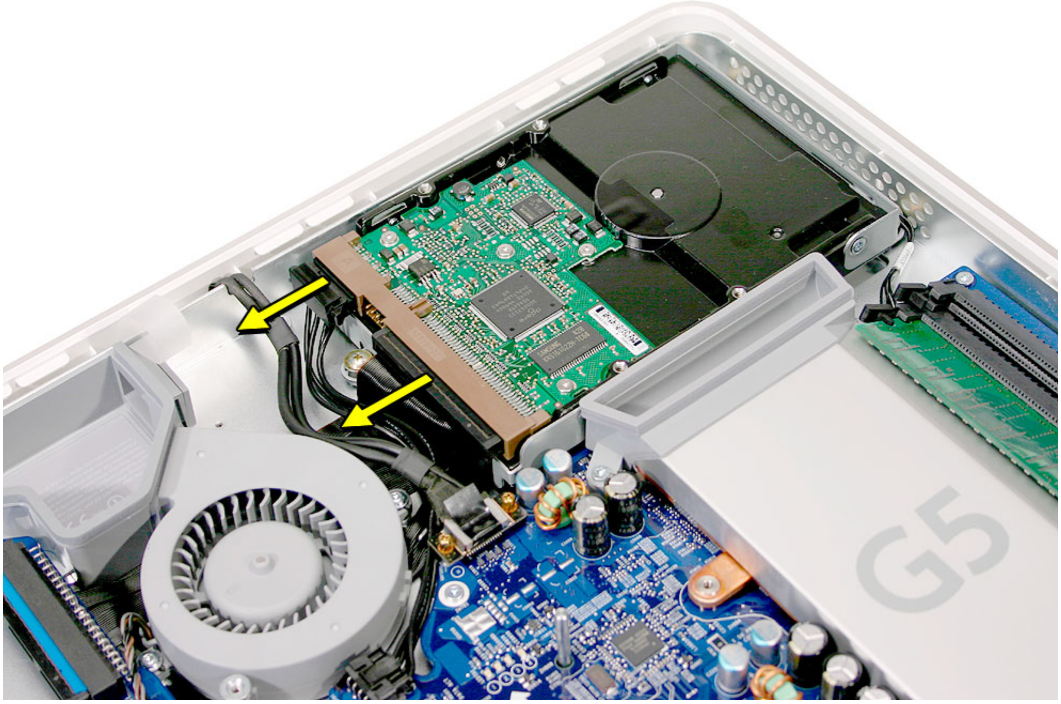
5. Locate the black cable and white connector on the end of the hard drive.



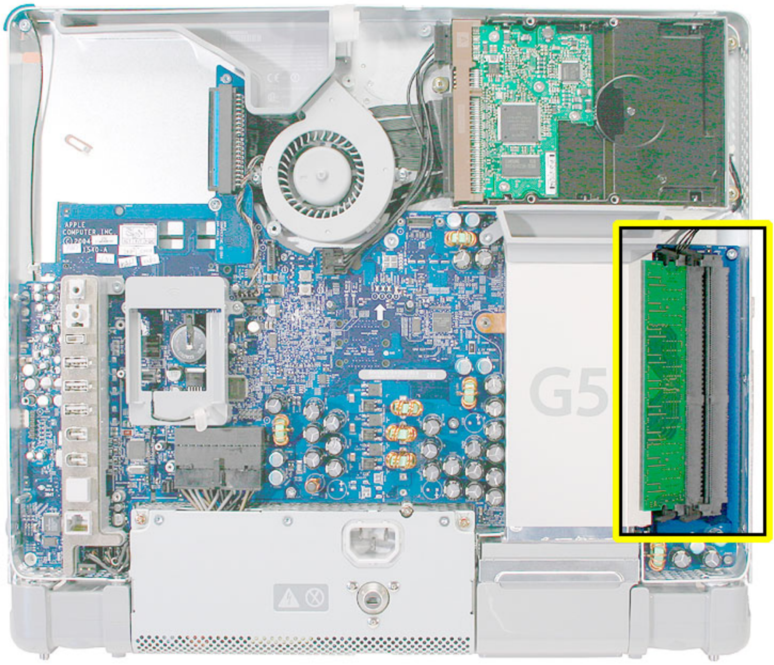
6. Carefully lift the hard drive up about one inch and disconnect the black cable from the white connector. **Note:** Leave the other end of the cable attached to the board.



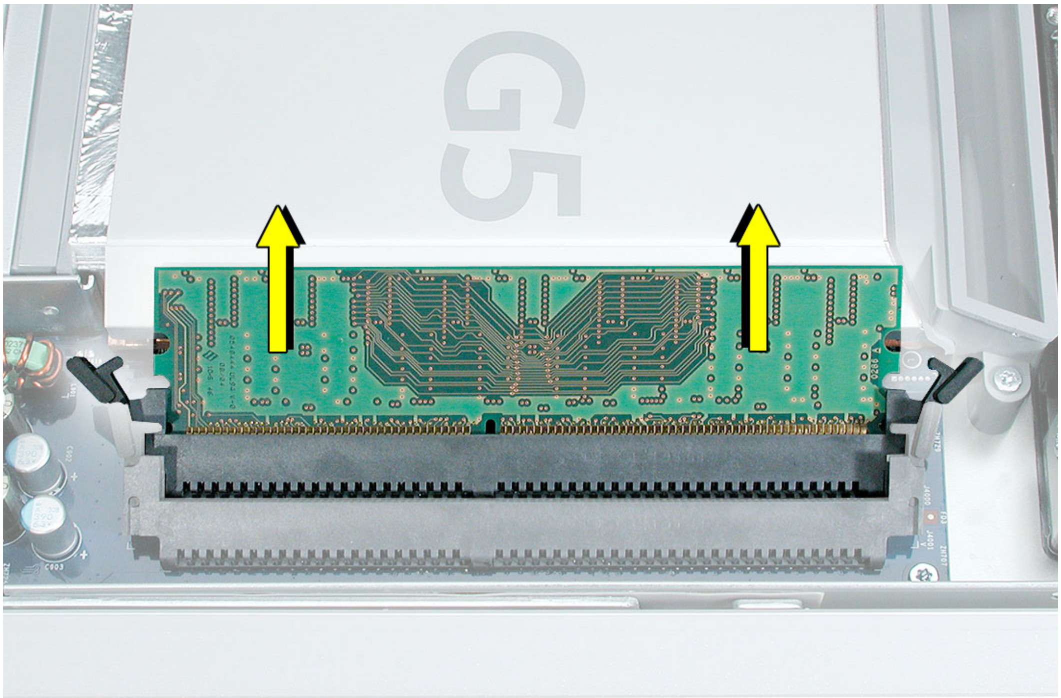
7. Using your fingers, disconnect the drive data cable and power cable from the hard drive. Lift the hard drive up and out of the midplane assembly.



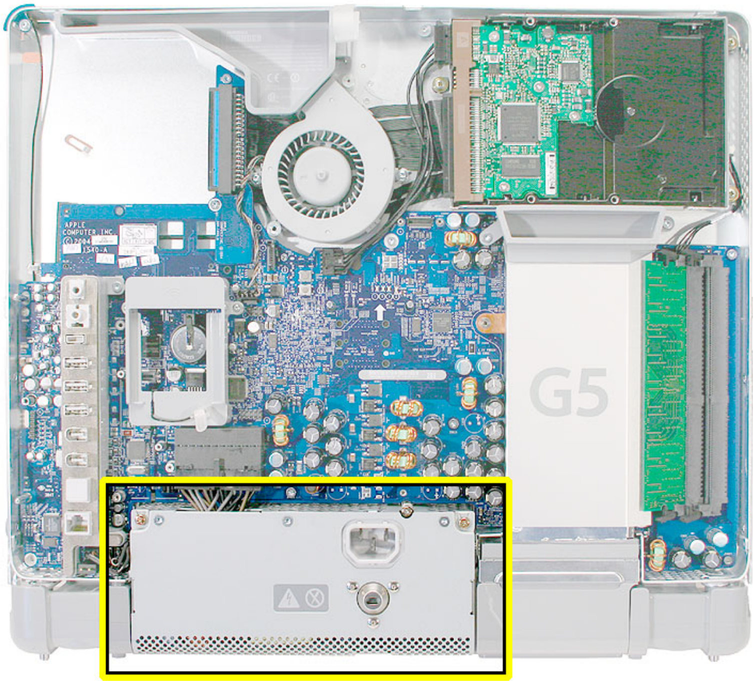
8. Locate the memory module(s) in the bottom right corner.



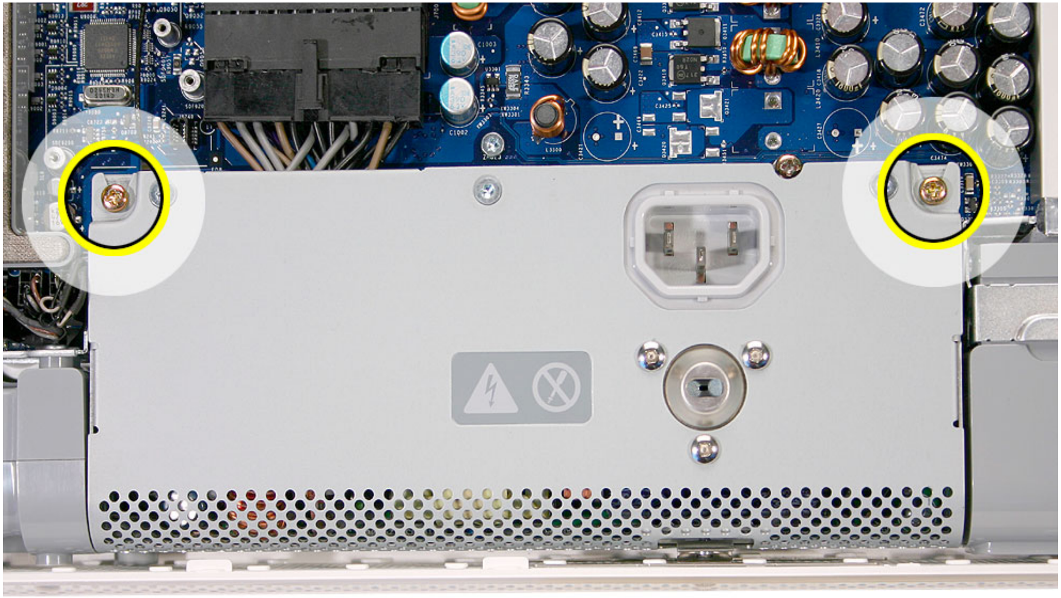
9. Rotate the computer counterclockwise so the memory is in the position shown below.
10. To release the memory from its slot, push down on the two side latches. Then pull the memory module out of the slot. Repeat this step if you have a second memory module.



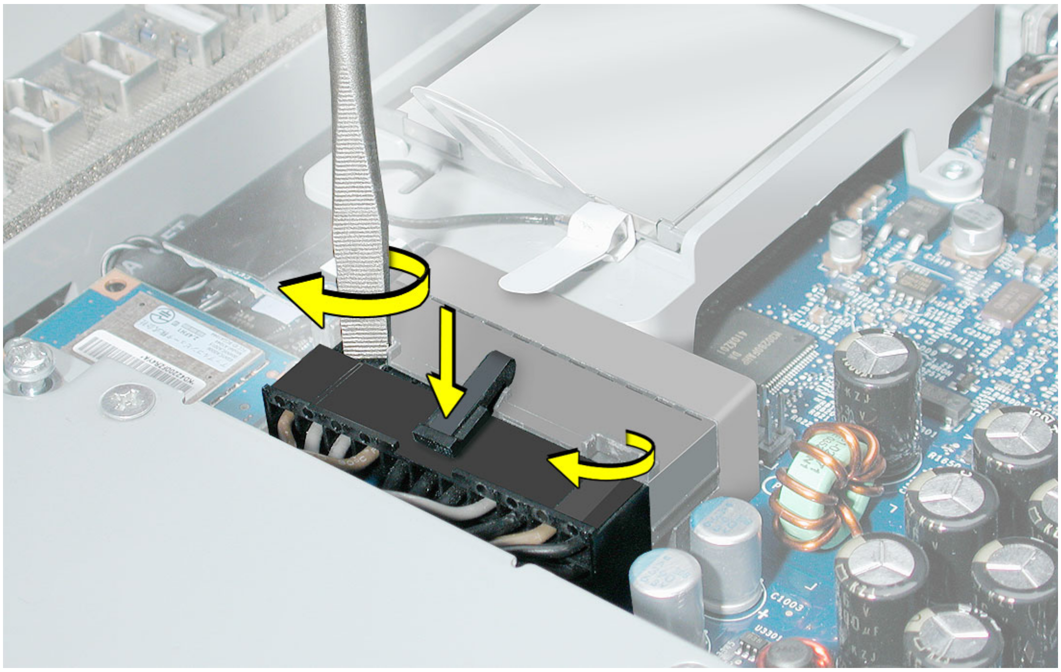
11. Locate the power supply at the bottom of the computer.



12. Loosen the two outer screws on the power supply by turning them counterclockwise.
    Note: These screws are captive; they cannot be removed.

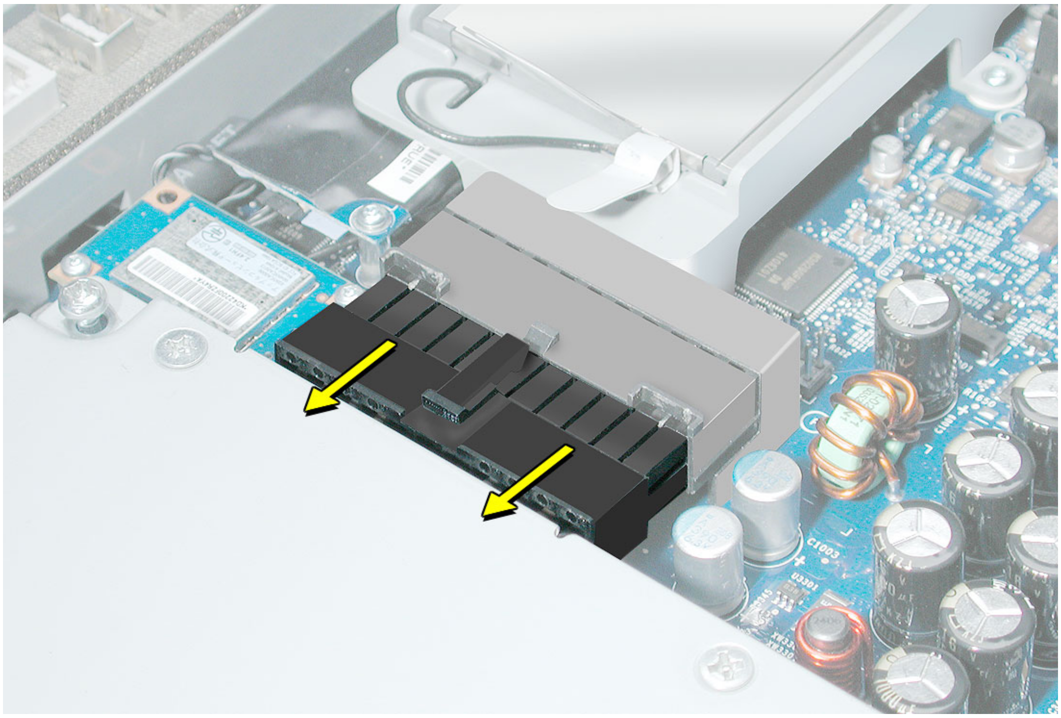


13. Disconnect the power supply cable by pressing the connector release tab and using a wide, flat blade screwdriver to pry apart the connector.



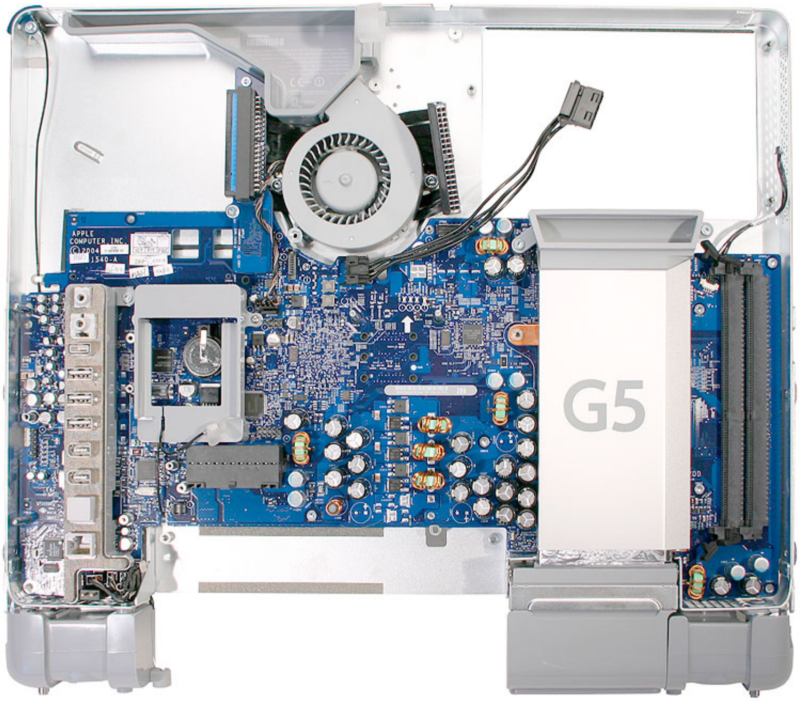
14. Pull the power supply cable out of the connector.Tilt up the power supply and lift it out of the midplane. Set the power supply aside.

Important: Return the midplane to Apple in the packaging provided



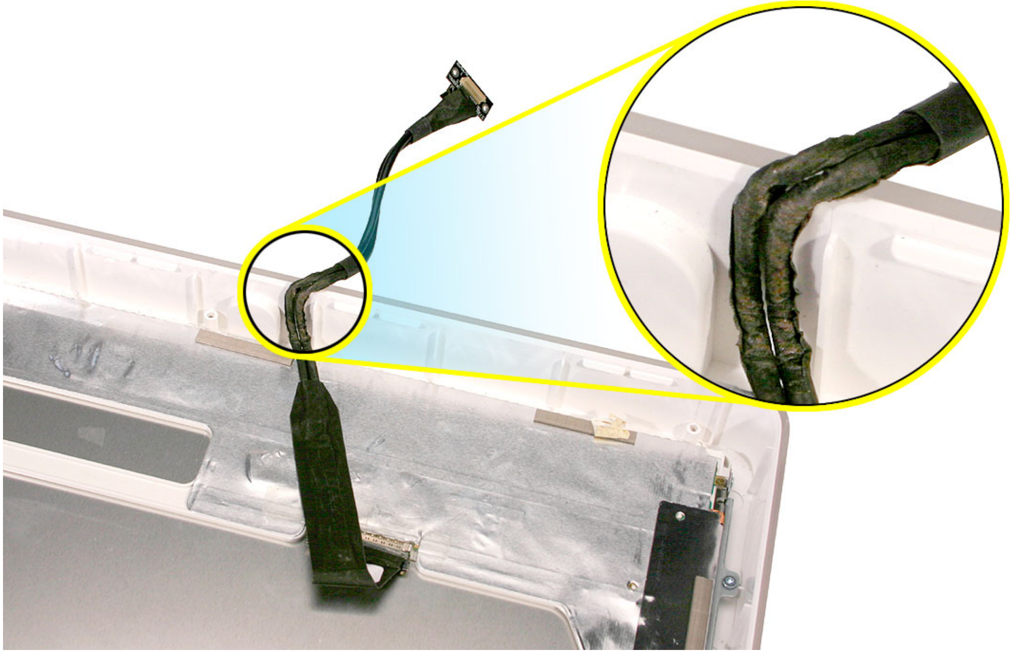
Replacement the Midplane, No Optical

1. Remove the replacement midplane from its packaging.

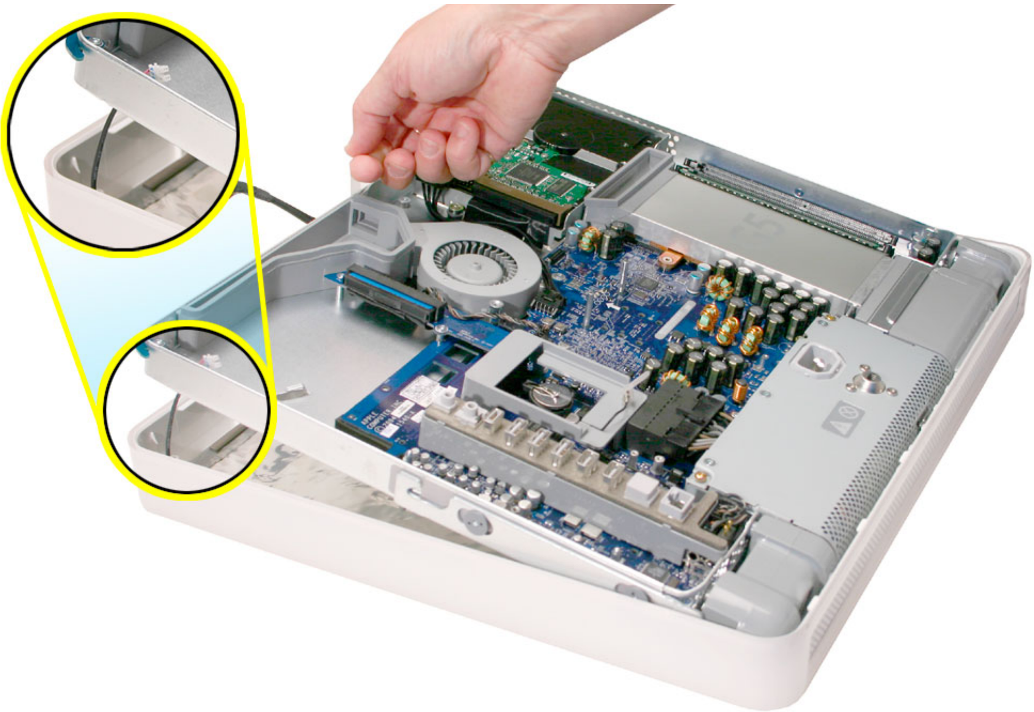


2. Position the display/bezel assembly with the display face down on a clean soft cloth

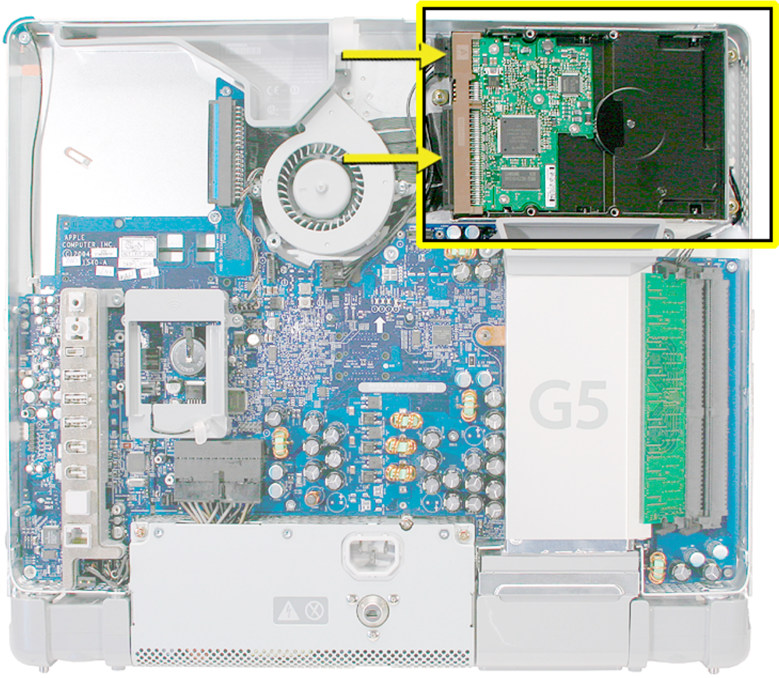
3. Make sure that the black video cable is tucked into the groove on the bezel as shown. A cutout on the midplane chassis lines up with the groove on the display/bezel assembly housing



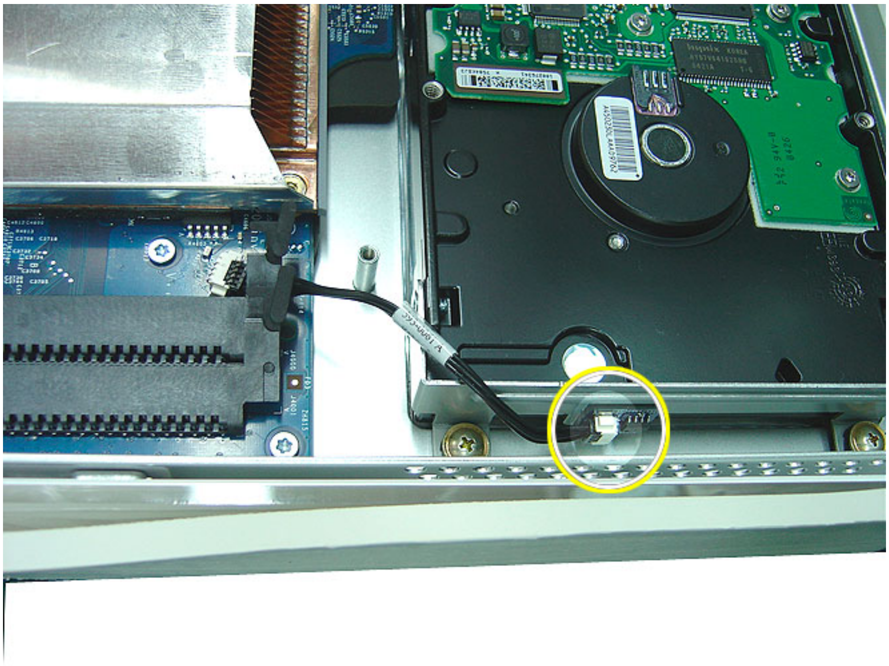
4. Lower the midplane into the display/bezel assembly housing. Use the tab to lower and adjust the midplane into the housing. As you lower the midplane, pull the inverter cable through the opening in the chassis.



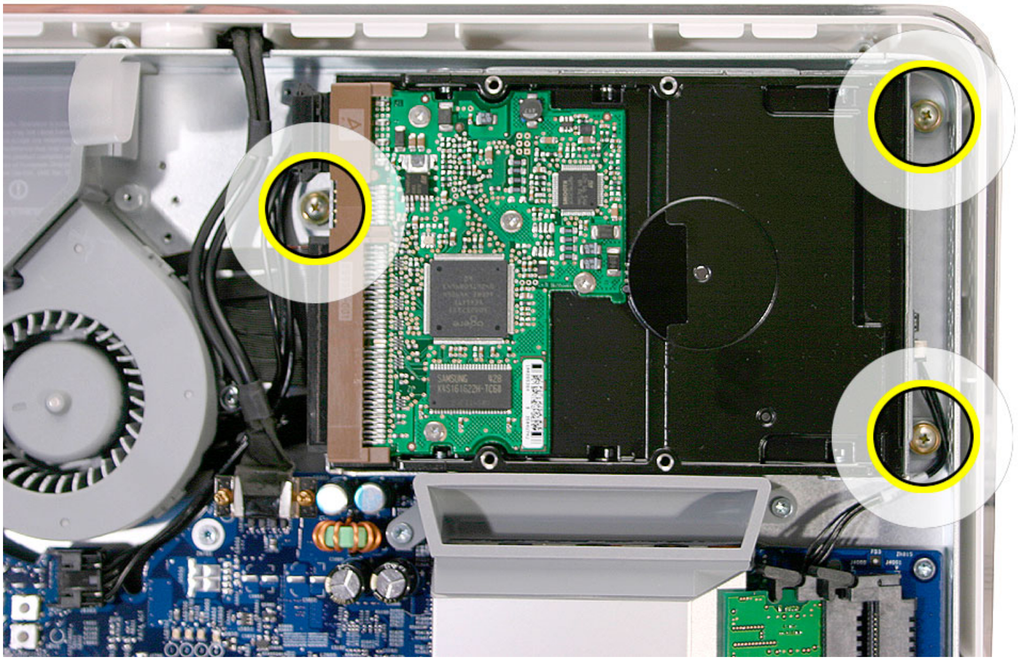
5. Locate the hard drive. Connect the drive data cable and power cable to the hard drive. Lower the hard drive into place on the midplane.



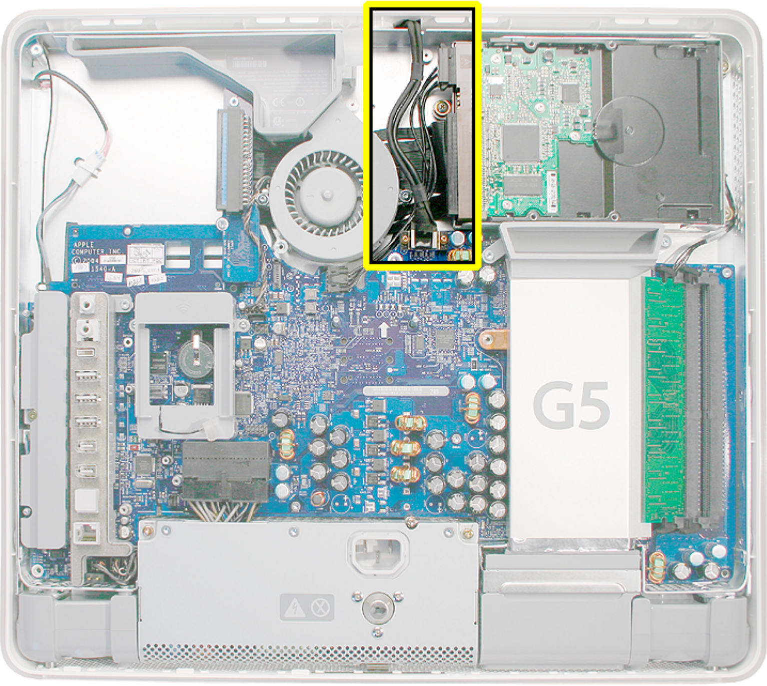
6. Connect the black cable to the white connector on end of the hard drive.



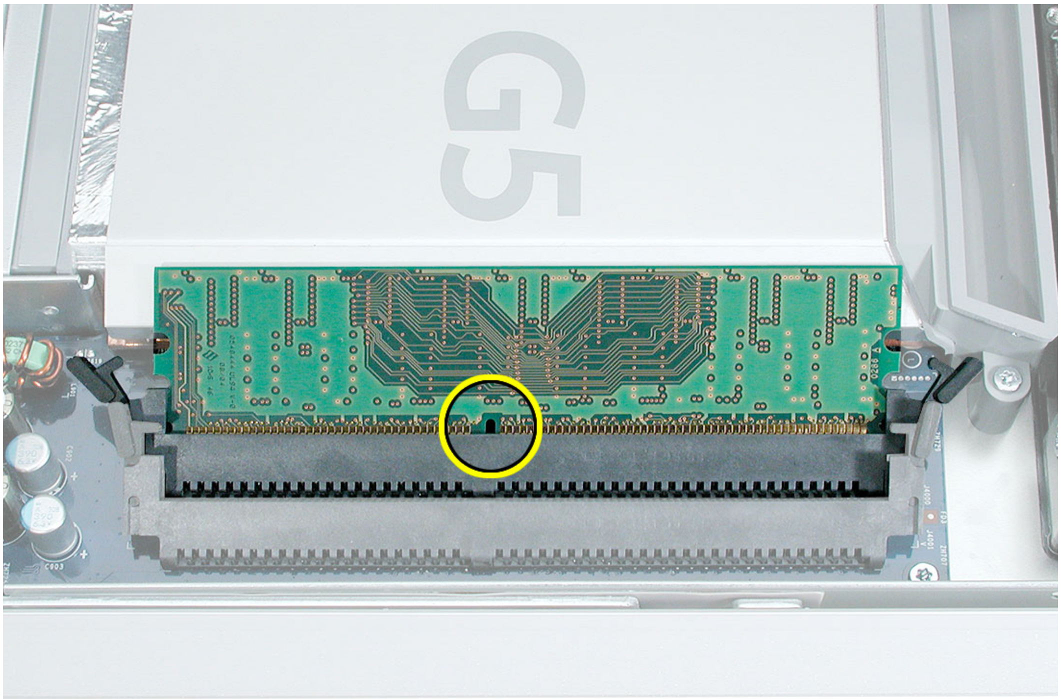
4. Replace the three hard drive screws.



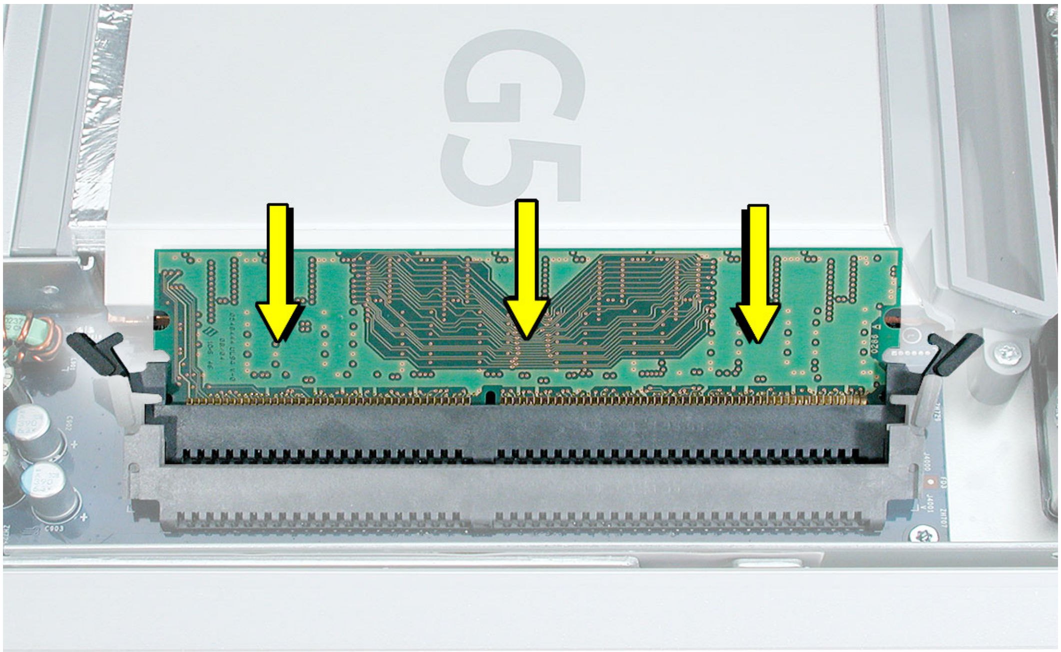
4. Reconnect the video cable and replace the two video cable screws. Tuck the video cable into the area next to the fan and hard drive.



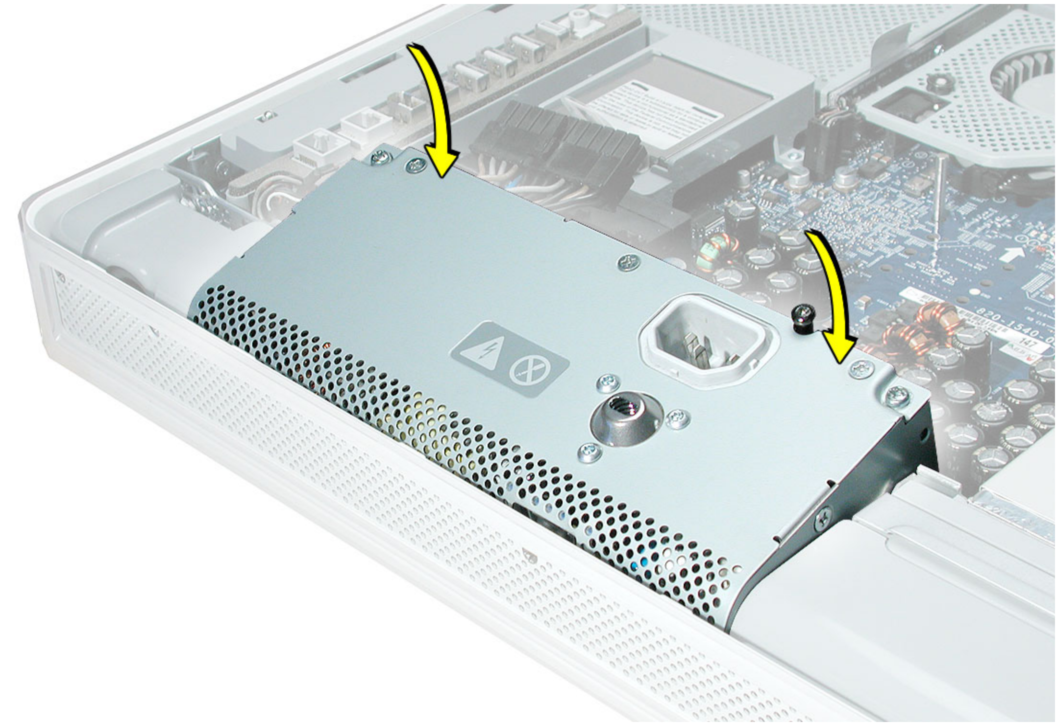
5. Replace the memory module(s) by lining up the notch on the module with the notch on the slot.



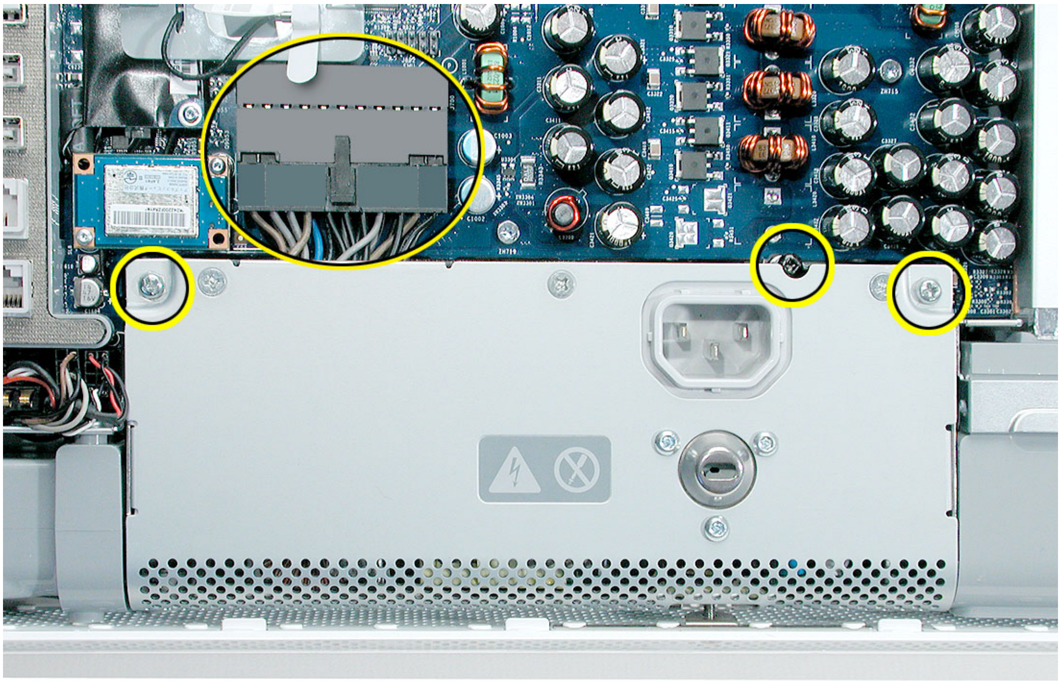
6. Press firmly on the memory module until it clicks into place. Use your thumb and index finger to push the module into the slot



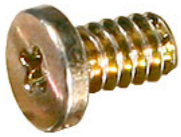
7. Lower the power supply into the midplane.

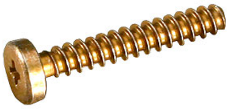


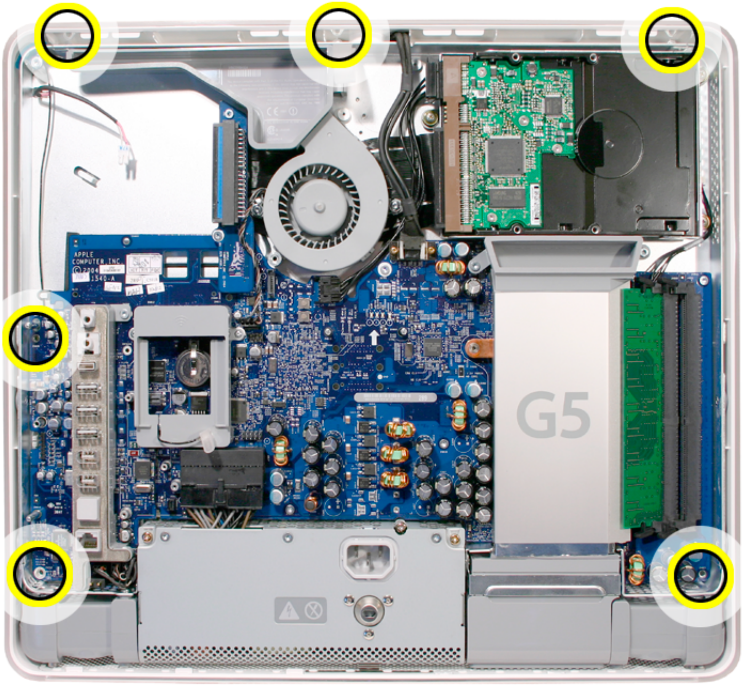
8. Connect the black power supply connector and tighten the three captive screws, turning them clockwise.



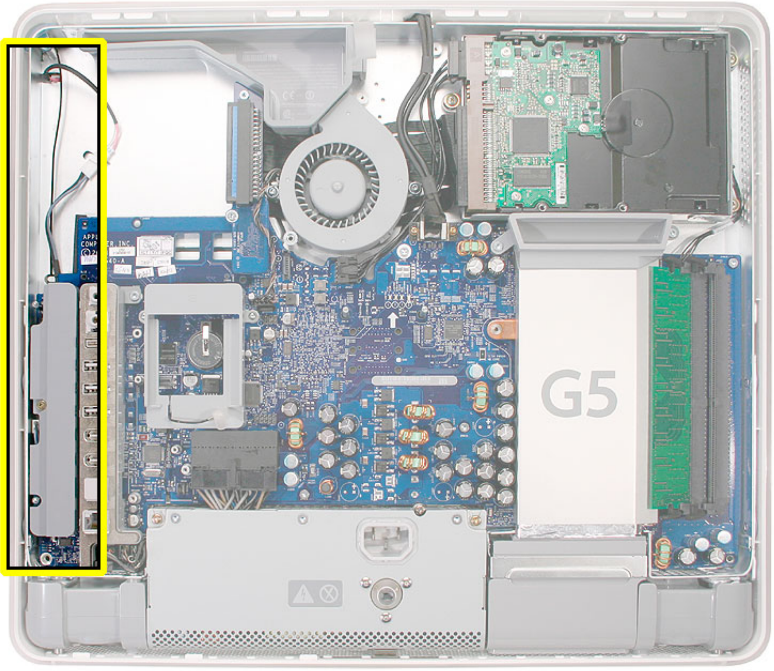
4. Replace the six case screws.The shorter screws attach along the top.



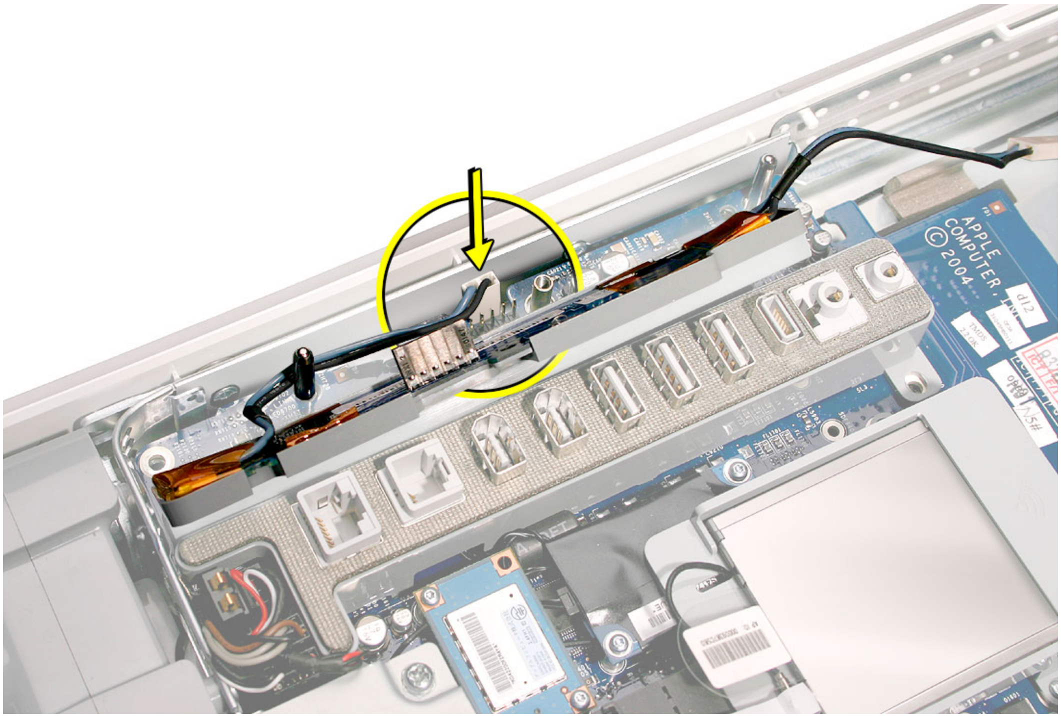




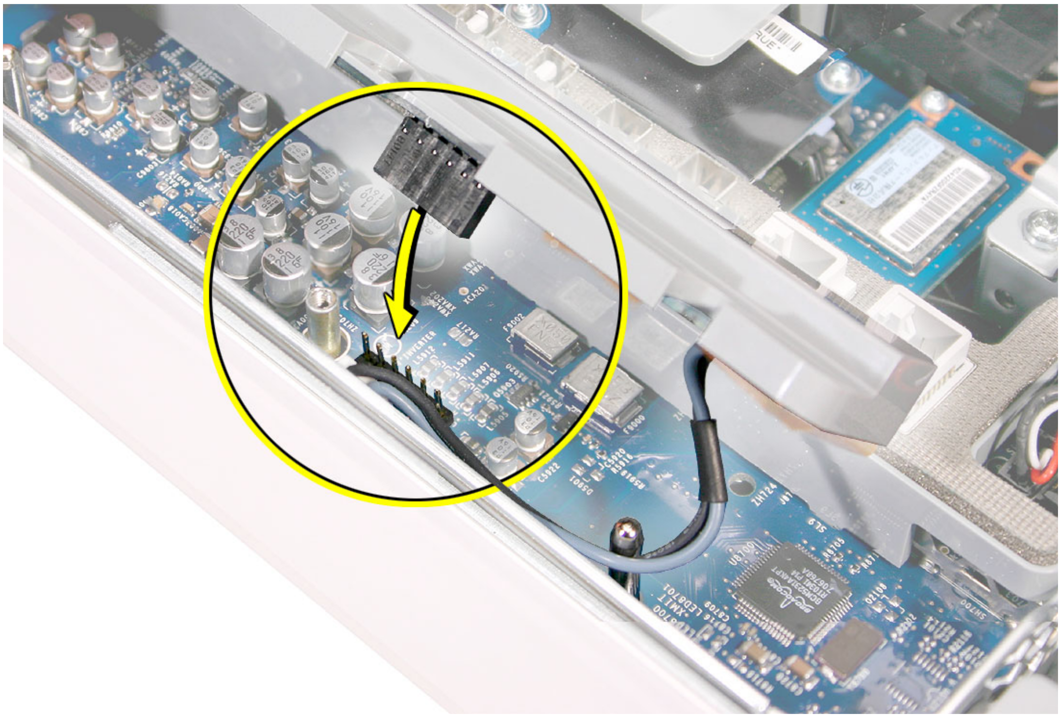
5. Locate the inverter board that you set aside.



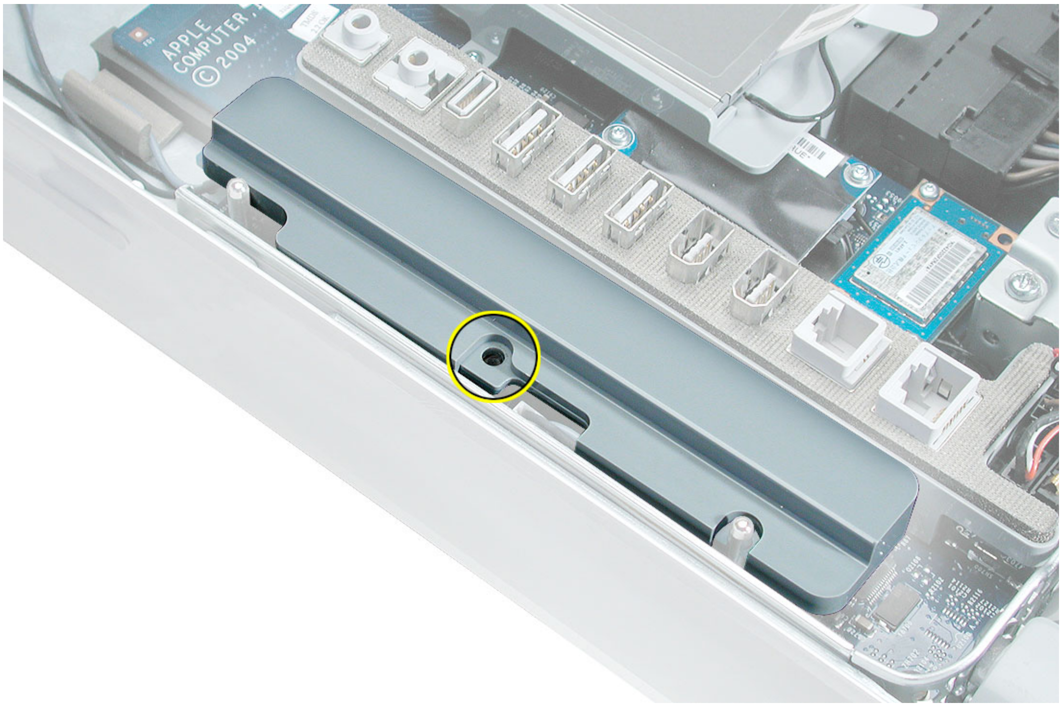
6. Connect the white connector on the inverter board to the main board. Route this cable around the silver post (as shown). **Caution:** Be careful not to bend the pins or prick your fingers on the pins located next to the white connector.



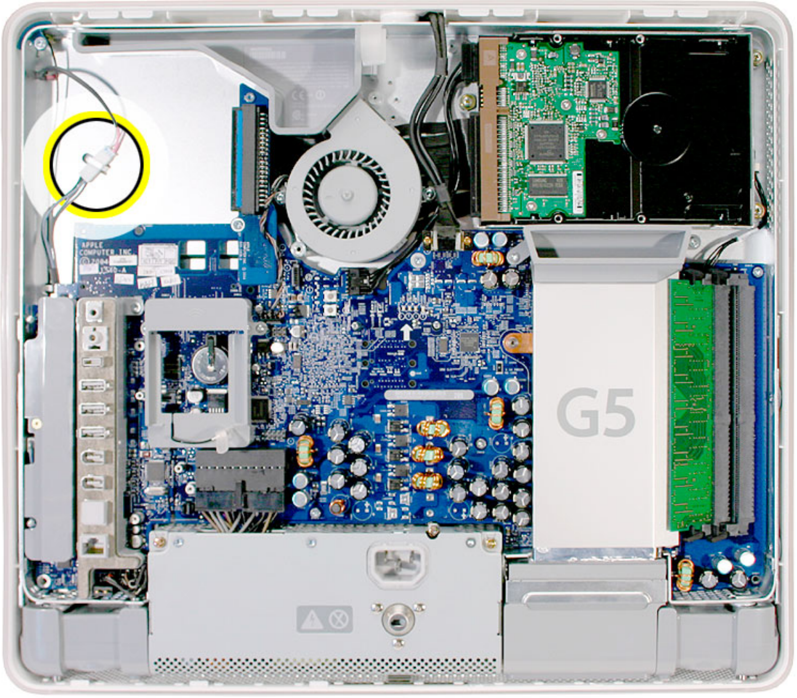
7. As you lower the inverter into place, connect the black connector to the pins on the board. Use the tall silver pins as a guide to align the inverter. **Important:** Make sure the connector mates with the pins. Double check that it’s connected.



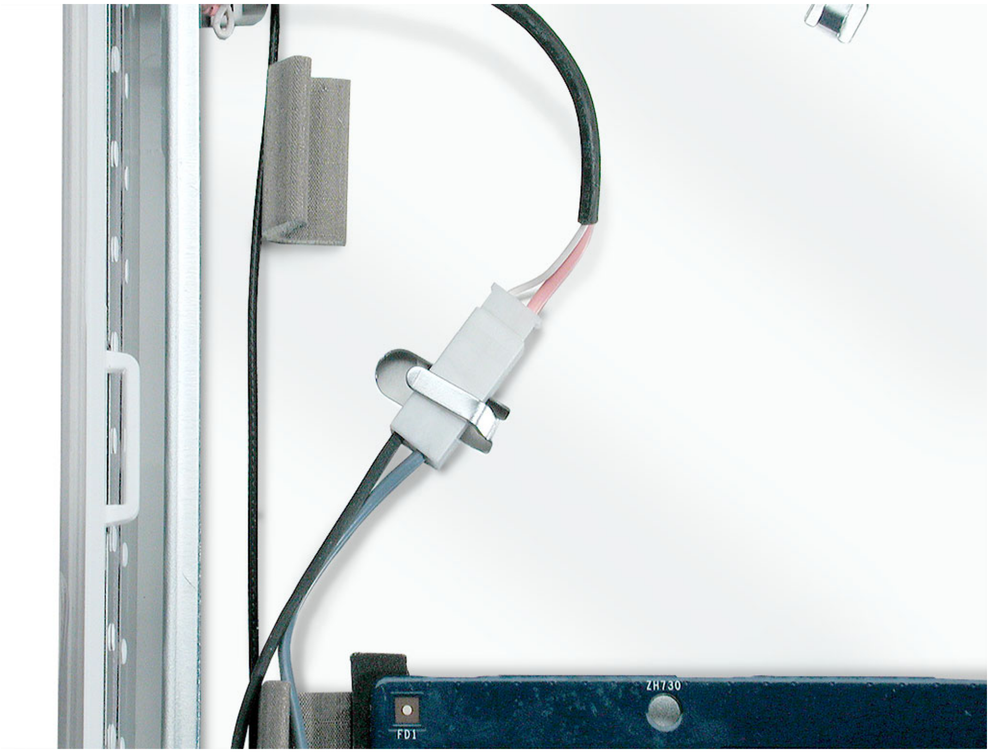
4. Replace the inverter screw.



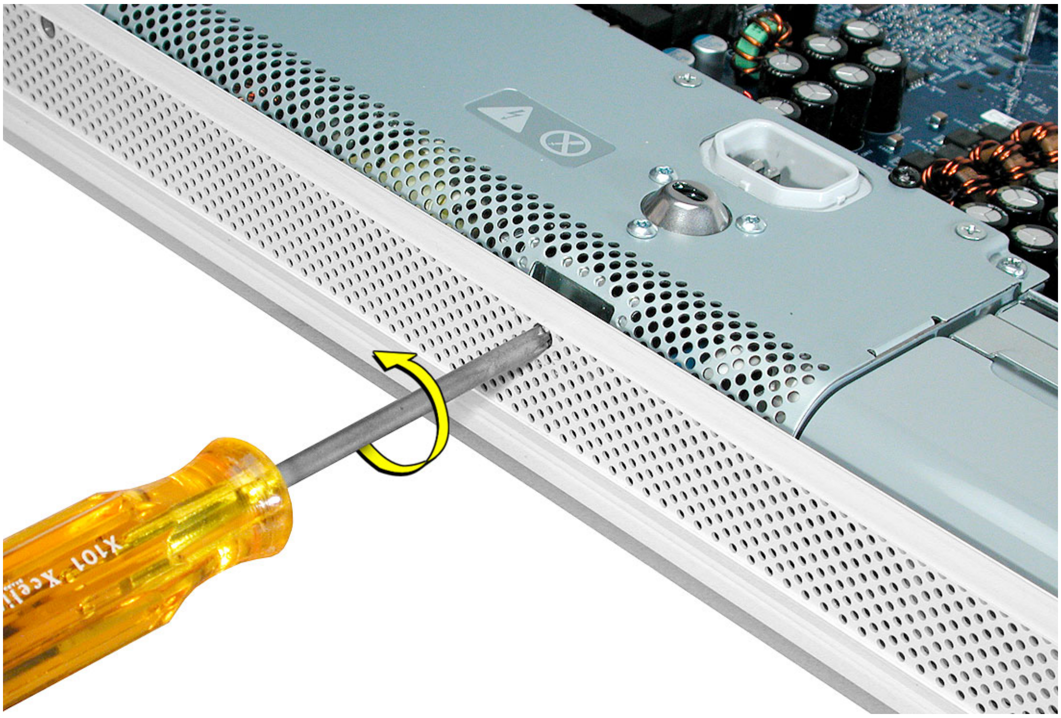
5. Reconnect the inverter-to-display panel cable. **Important:** The connector is keyed (it fits together only one way).



6. Secure the connector under the metal tab.



7. Turn the middle case screw counterclockwise about five revolutions. This step prepares the back cover to be installed and secured.



Display/Bezel

Tools Required

- Use the tool provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or something equivalent to hold the screws

Preliminary Steps

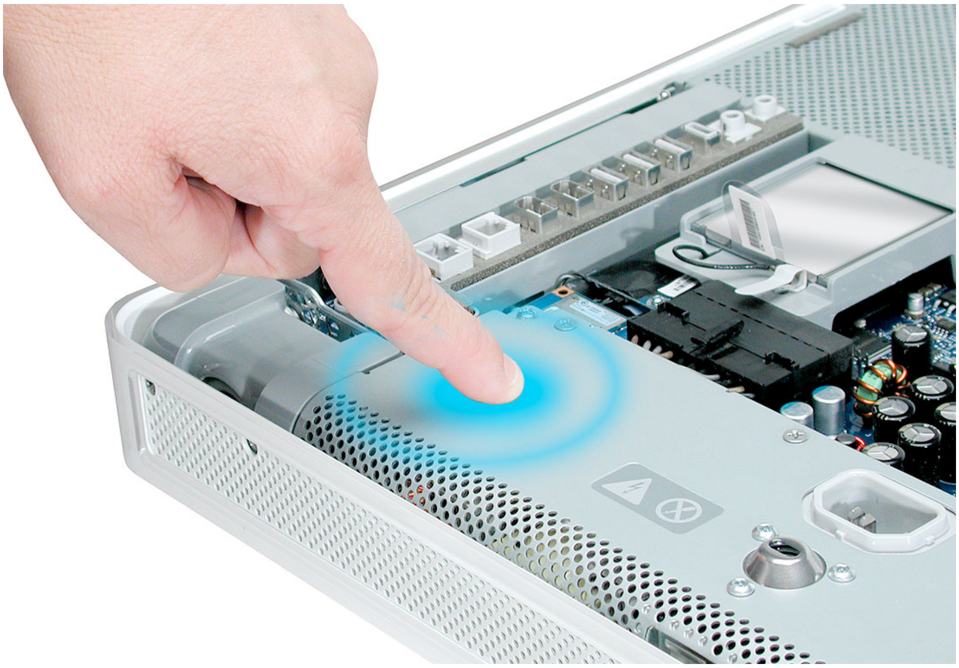
Before you begin, remove the cover.

Part Location

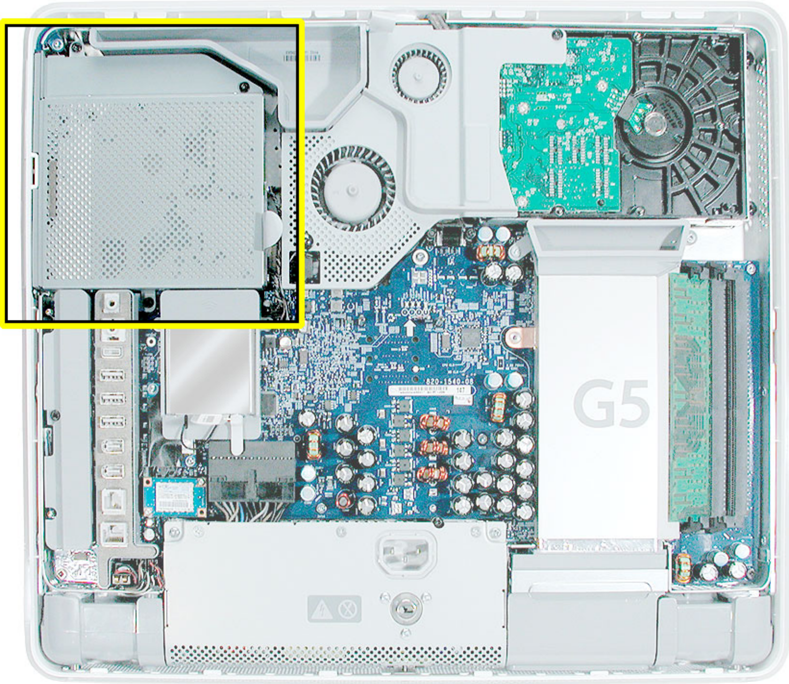
Removing the Display/Bezel

1. To access the display/bezel assembly other service modules have to be removed. This procedure will show you how to remove and replace each module. As you remove each module, set it aside, along with the screws for that module.
2. **Important:** Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

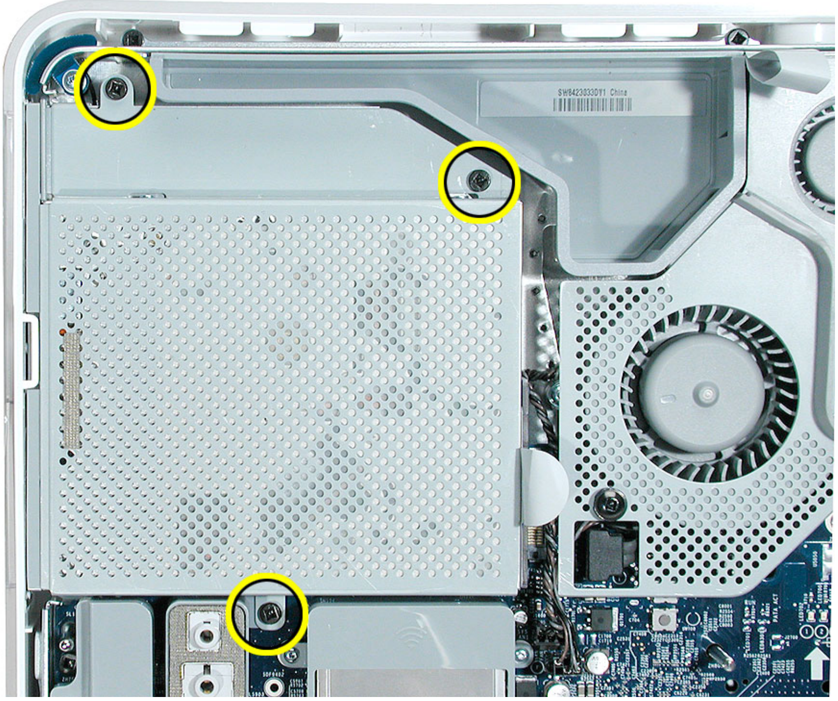
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



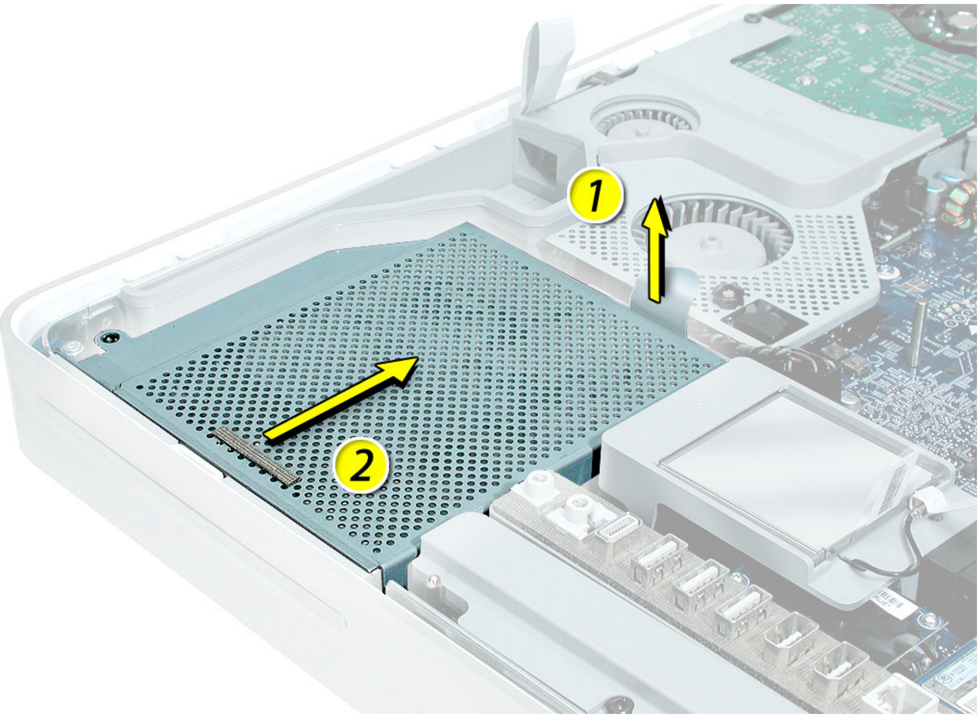
3. Locate the optical drive.



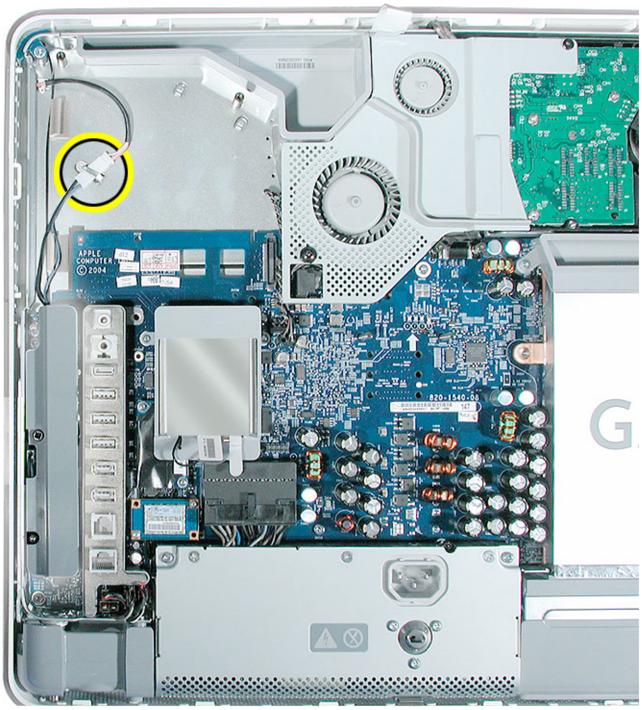
4. Using the tool provided, or a Phillips #1 screwdriver, remove the three optical drive screws.



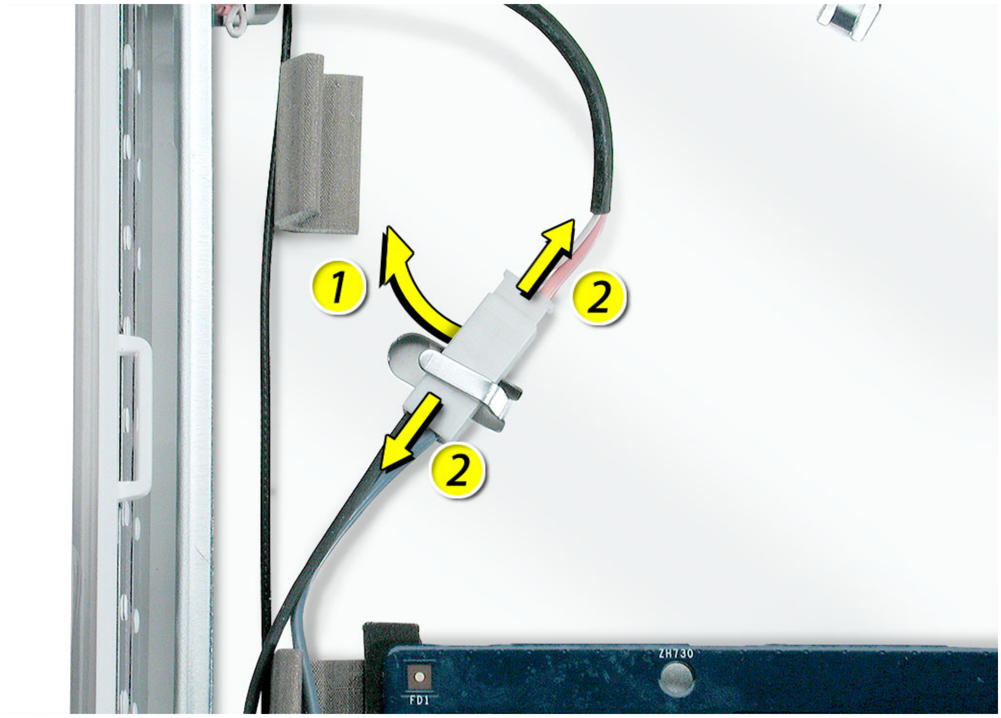
5. Pull the optical drive tab straight up and then to the right. Set the optical drive aside.



6. Locate the inverter-to-display panel cable connector.

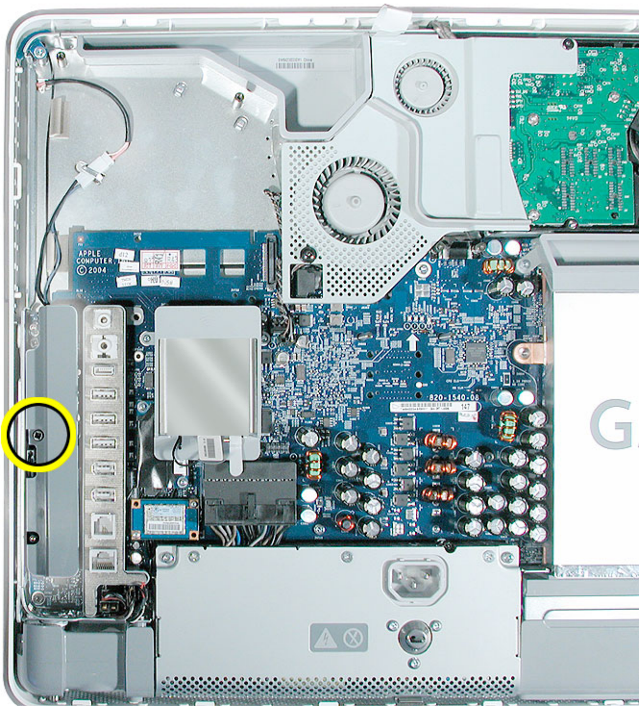


7. Release the cable from the clip. Disconnect the cable connector.

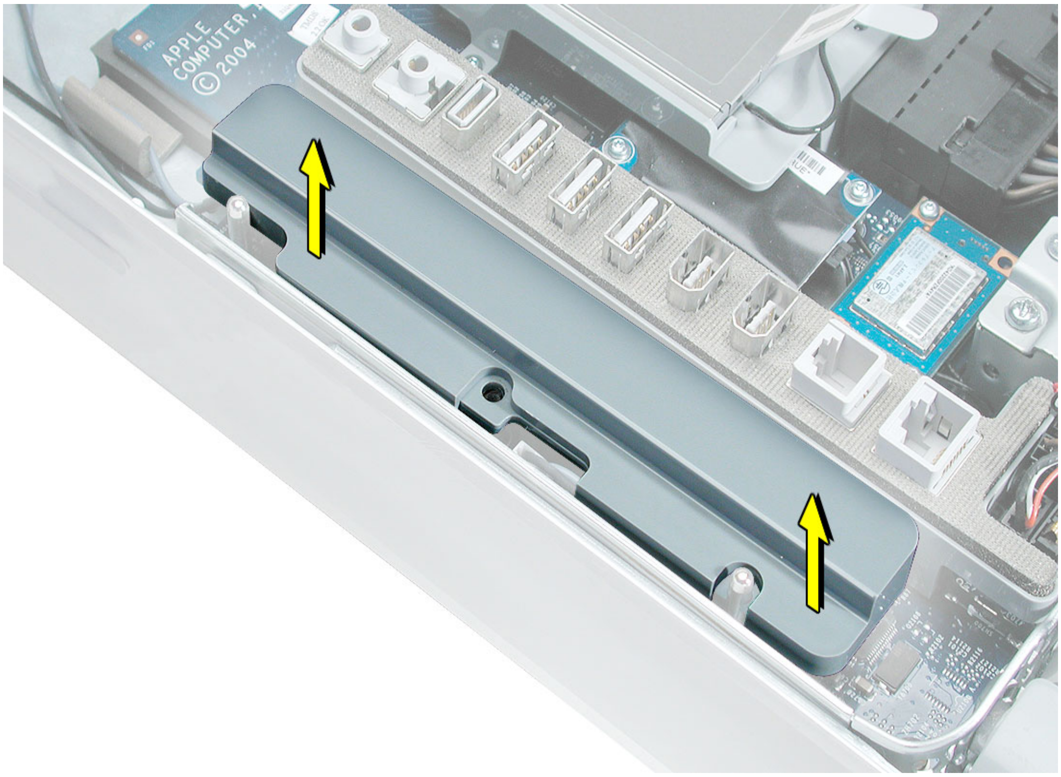

1
2
2
ZH730
FD1

4. Using the tool provided, or a Phillips #1 screwdriver, remove the inverter screw.

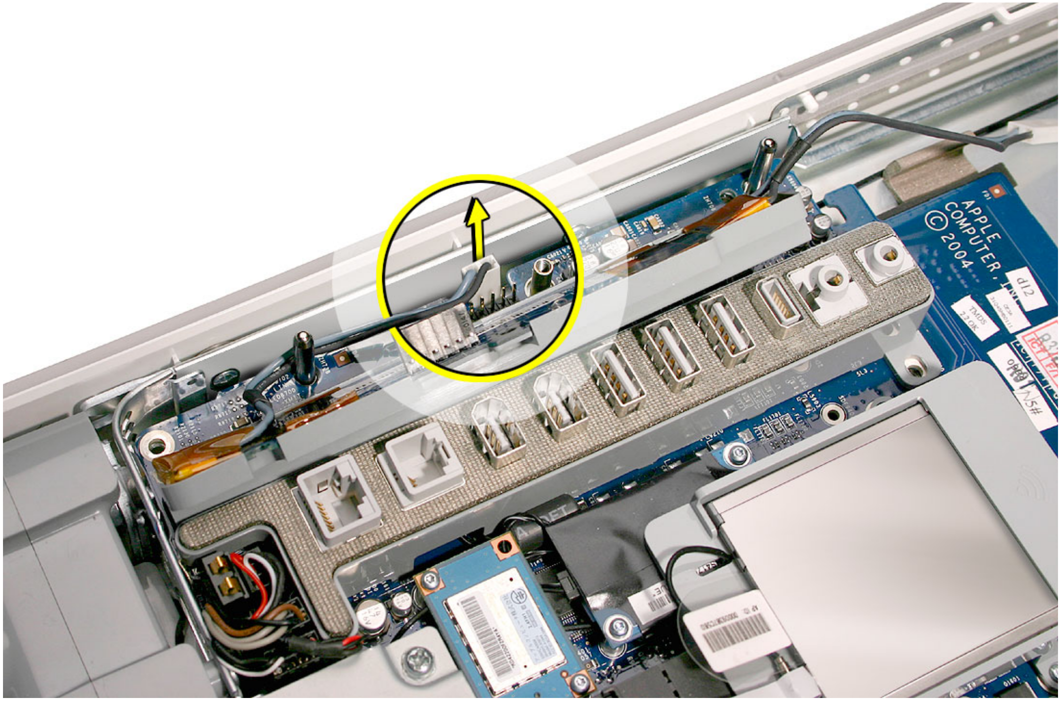
.


APPLE COMPUTER
© 2004

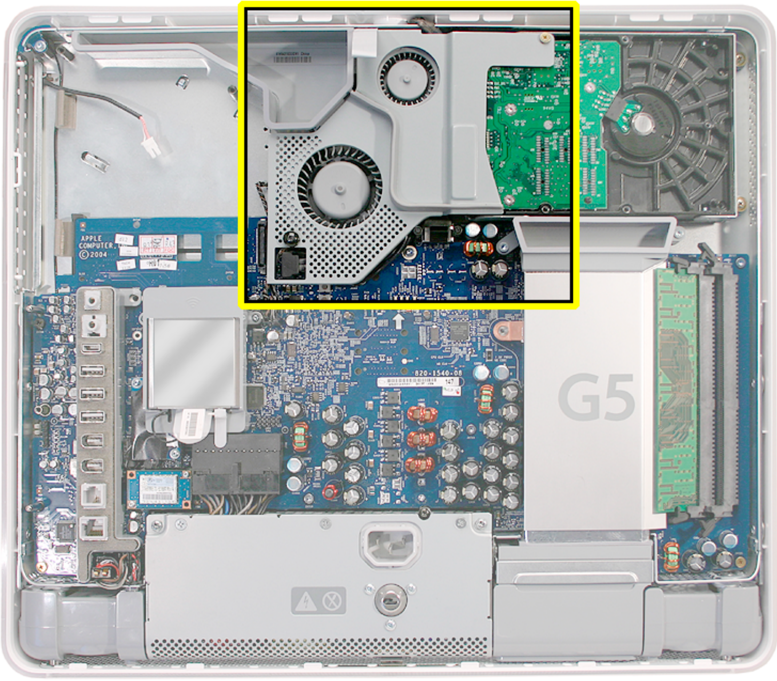
5. Lift the inverter straight up to disconnect the inverter board.



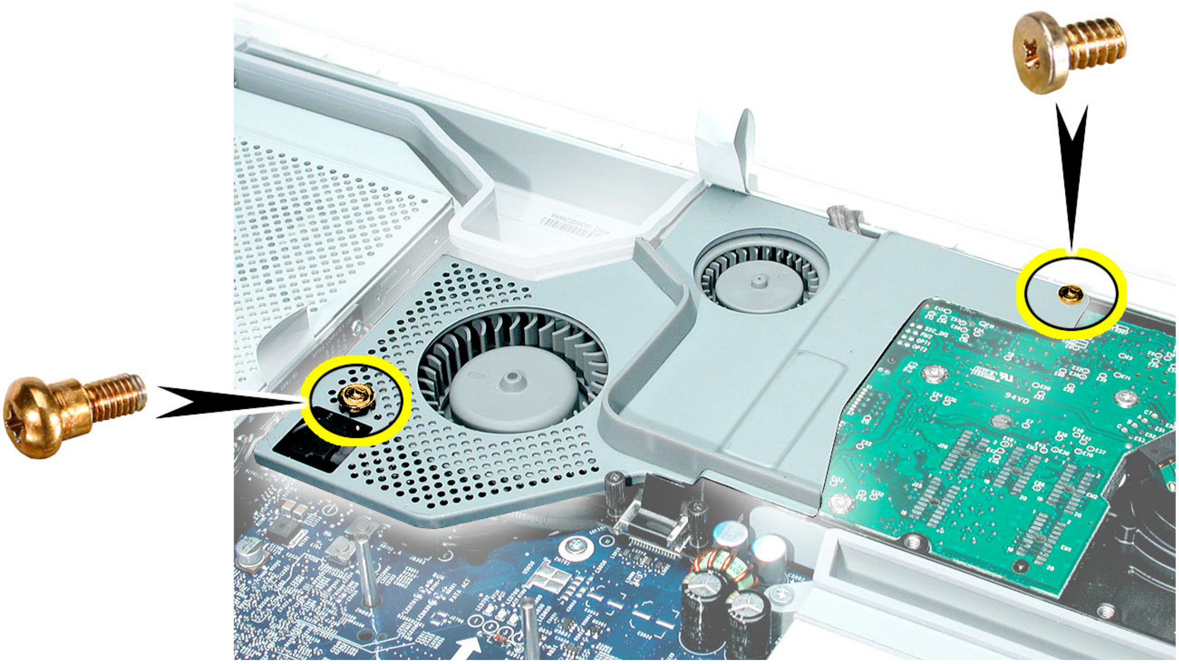
6. Disconnect the white connector (circled below) by pulling it straight up. Set the inverter board aside.
   Note: Be careful not to prick your fingers on the pins next to the white connector.



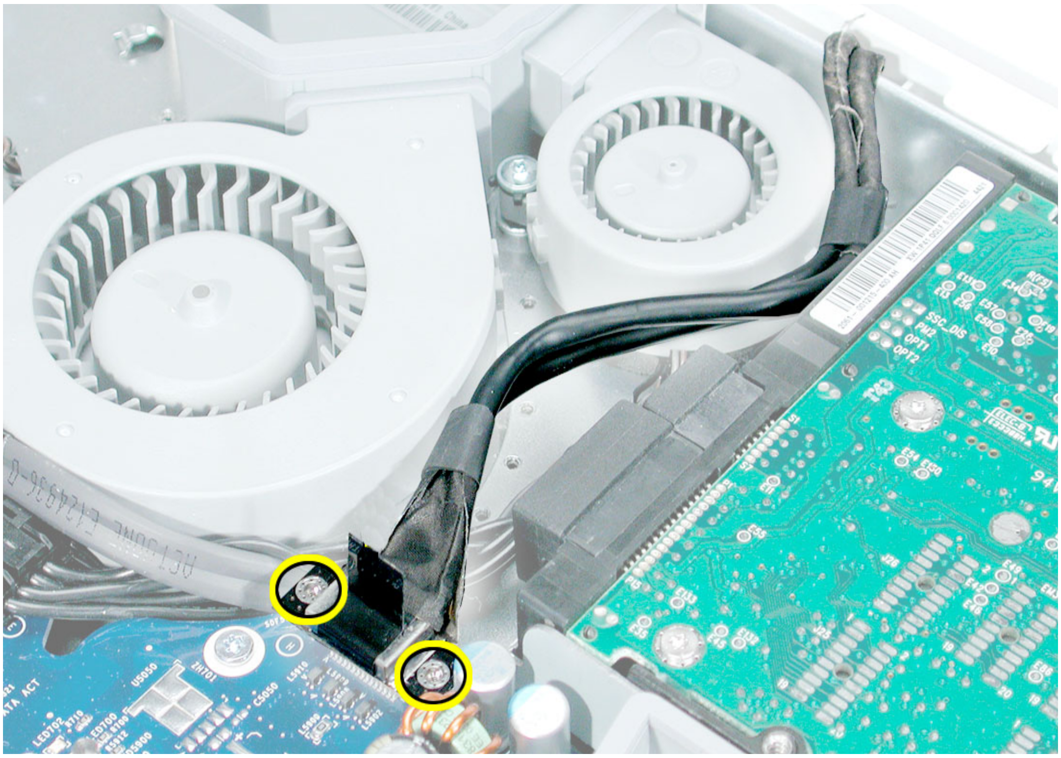
7. Locate the fan cover shown below.



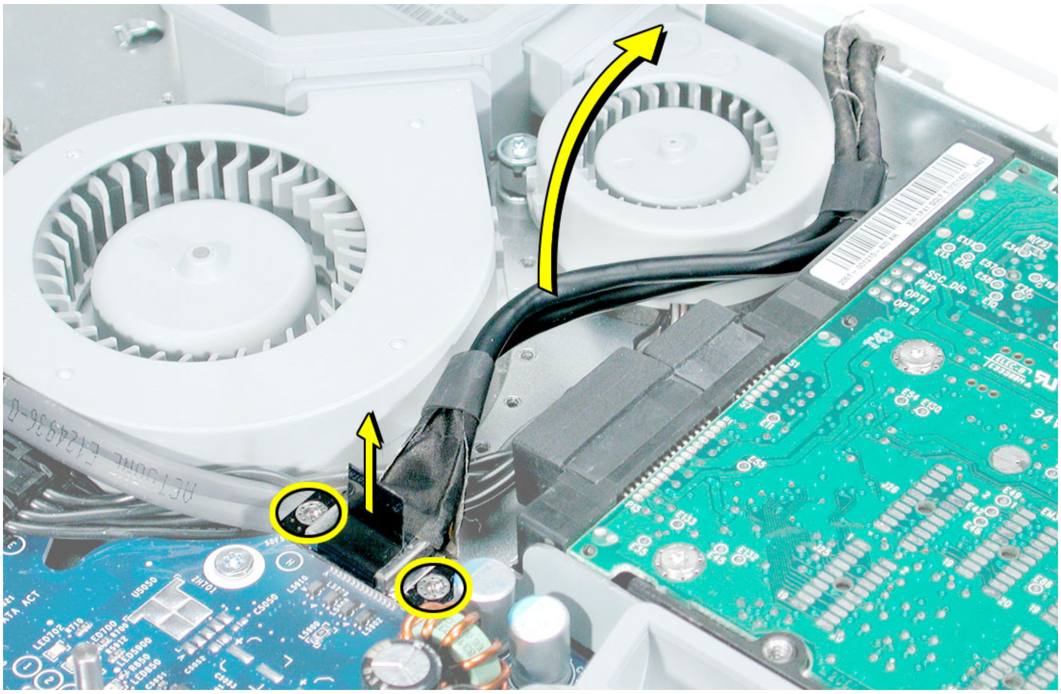
4. Using the tool provided, or a Phillips #1 screwdriver, remove the two fan cover screws. Lift the fan cover off the midplane and set the fan cover aside..



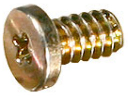
4. Locate the black video cable next to the fans. Remove the two screws and set them aside.

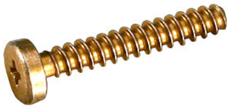


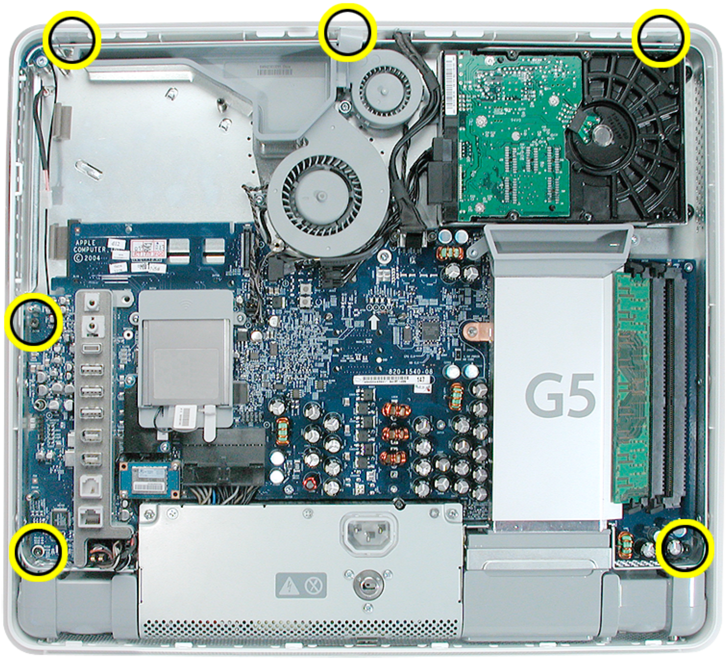
5. Pull up on the black tab to disconnect the cable. Flip the cable back, so it is out of the way.



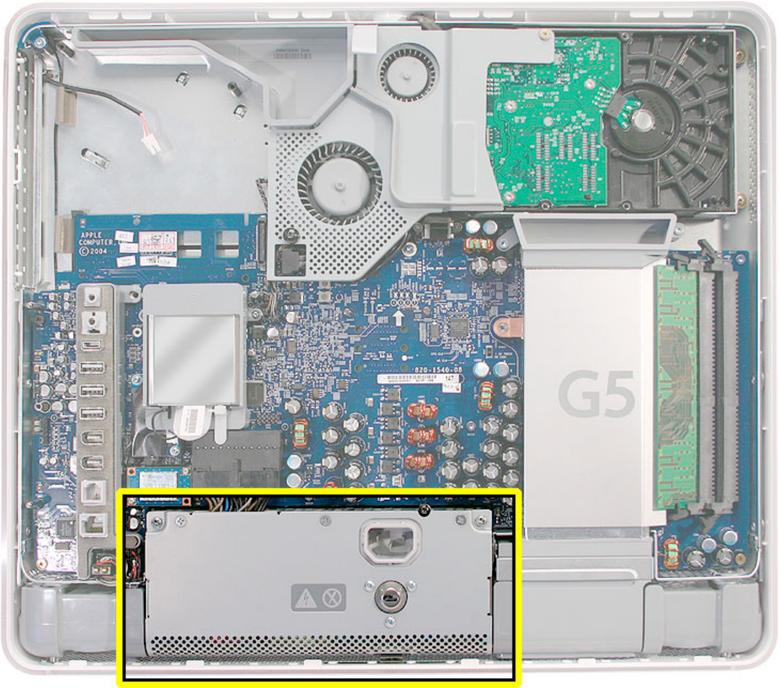
4. Remove the six screws, (three,short screws in the channel along the top, and three longer screws on the left and right sides of the board). Set the screws aside



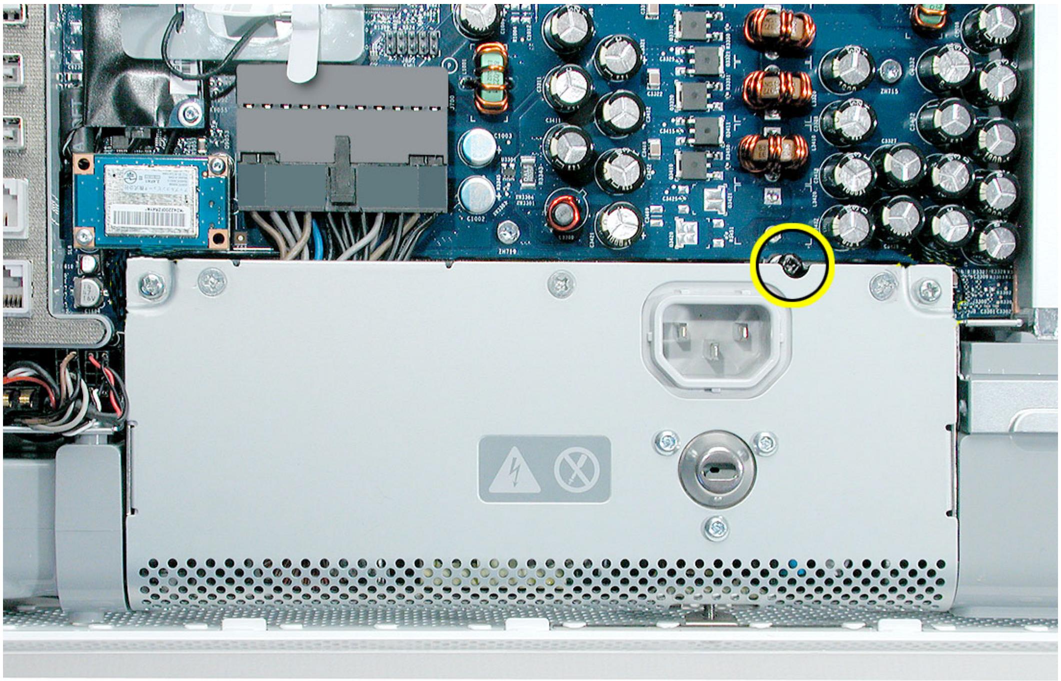




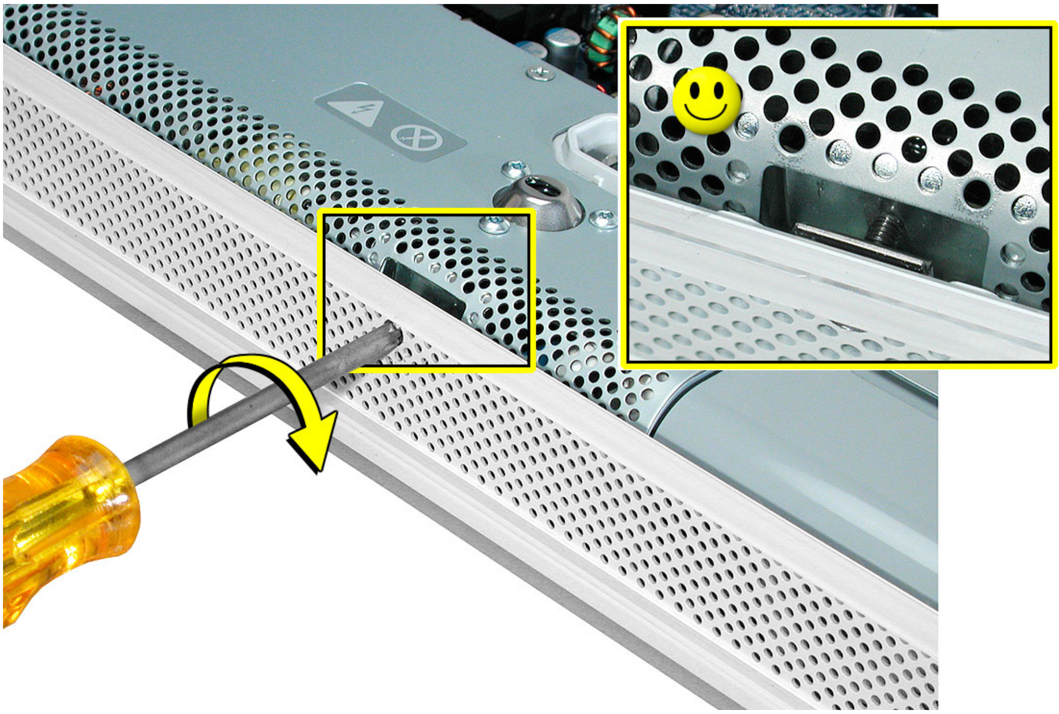
5. Locate the power supply at the bottom of the picture.



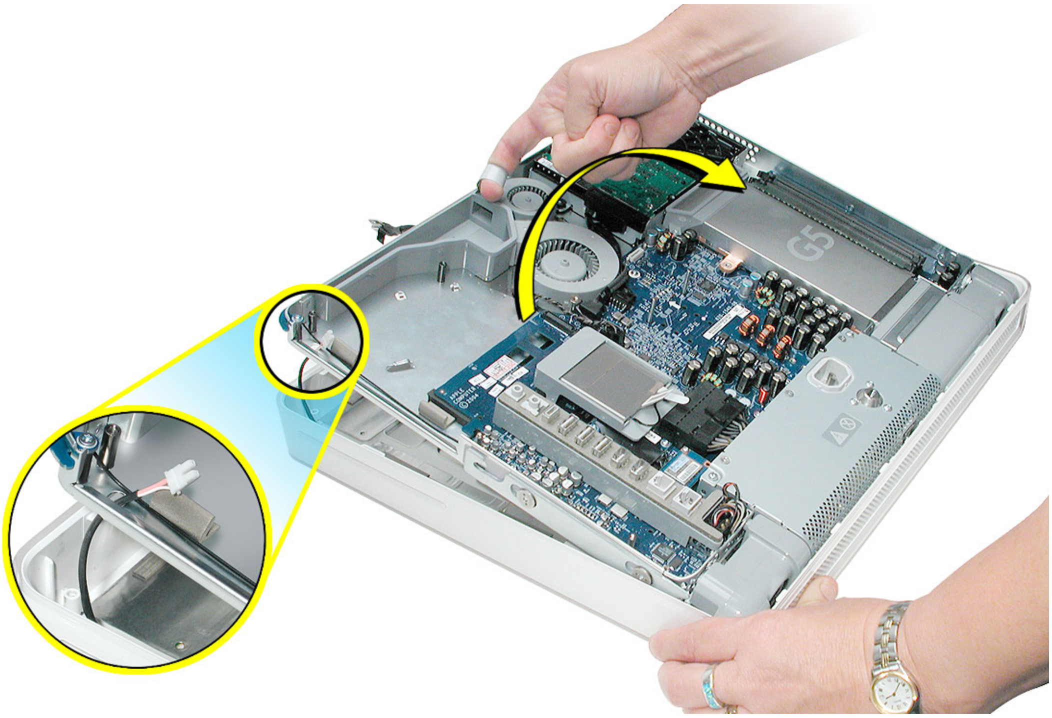
6. Loosen the captive power supply screw (circled below) by turning it counterclockwise five to eight revolutions. The screw is captive; it will not come out. **Note:** You do not need to remove the power supply.



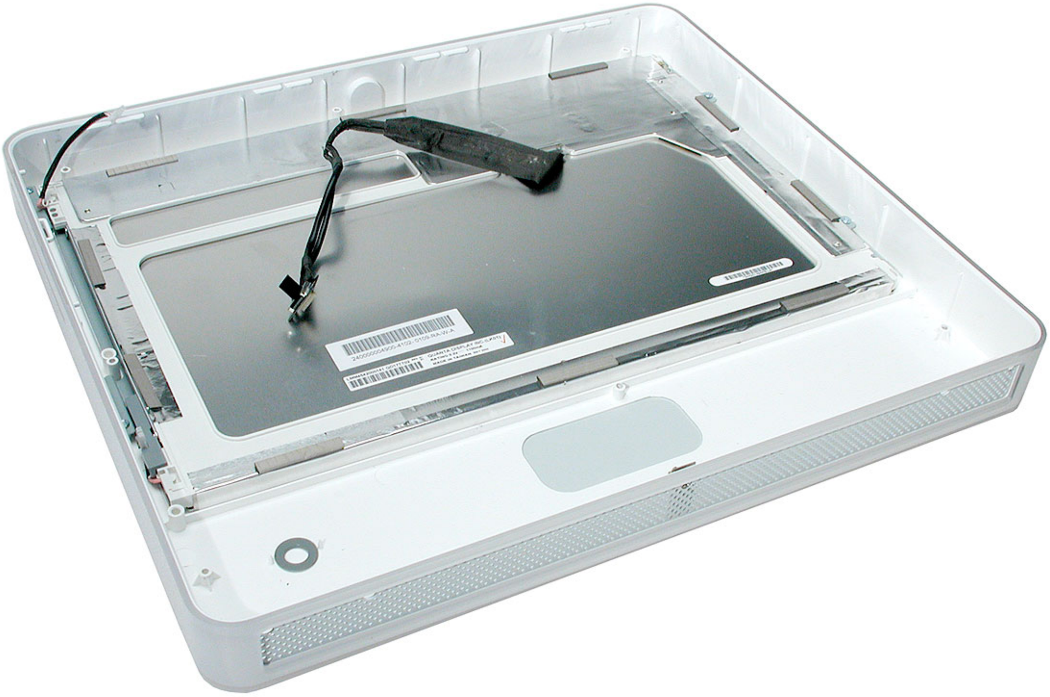
7. Turn the middle case screw clockwise about five revolutions. This releases a screw clamp that holds the power supply in the display/bezel assembly.



8. Locate the pull tab at the top of the computer. Pull the tab up to release the midplane assembly from the display/bezel. Pull the cable down through the opening in the midplane chassis. Set the midplane aside.

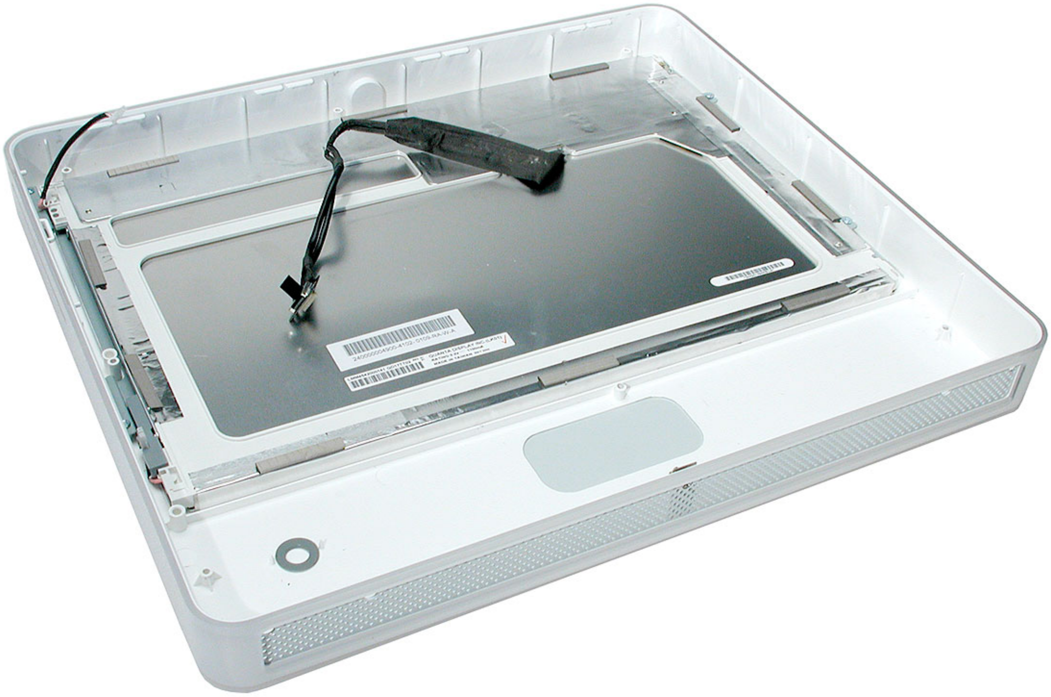


9. After removing the midplane you are left with the display/bezel service part shown below. **Important:** Return this display/bezel to Apple in the packaging provided.

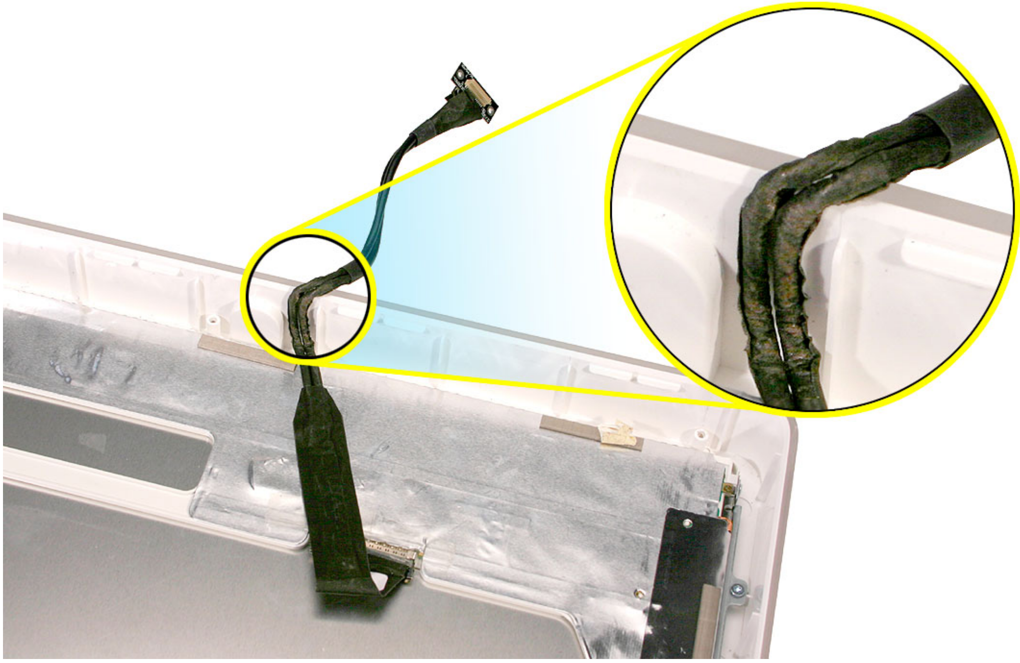


Replacing the Display/Bezel

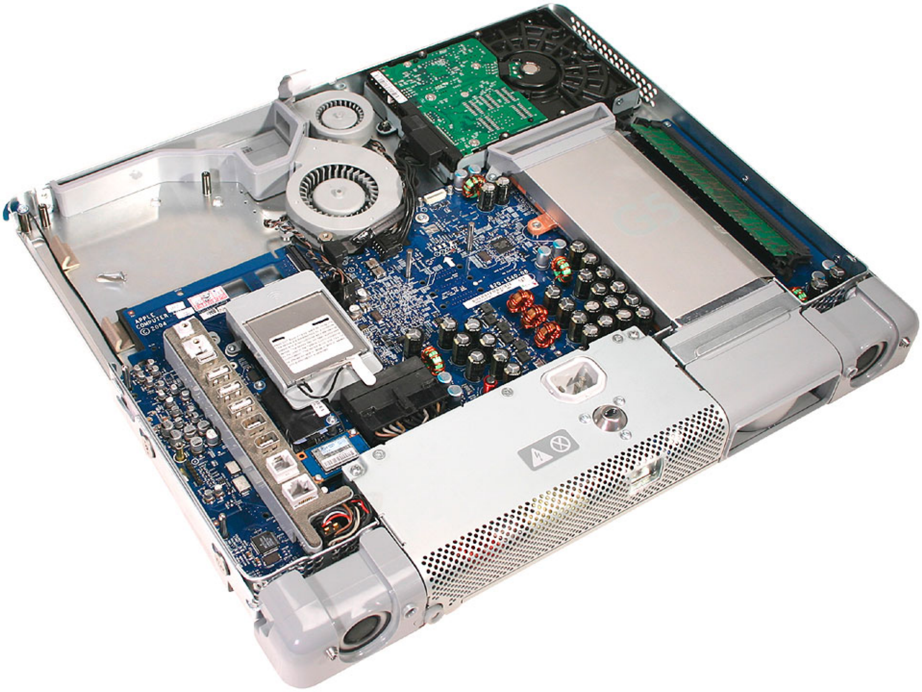
1. Remove the replacement display/bezel assembly from its packaging.
2. Position the assembly with the display face down on a clean soft cloth.



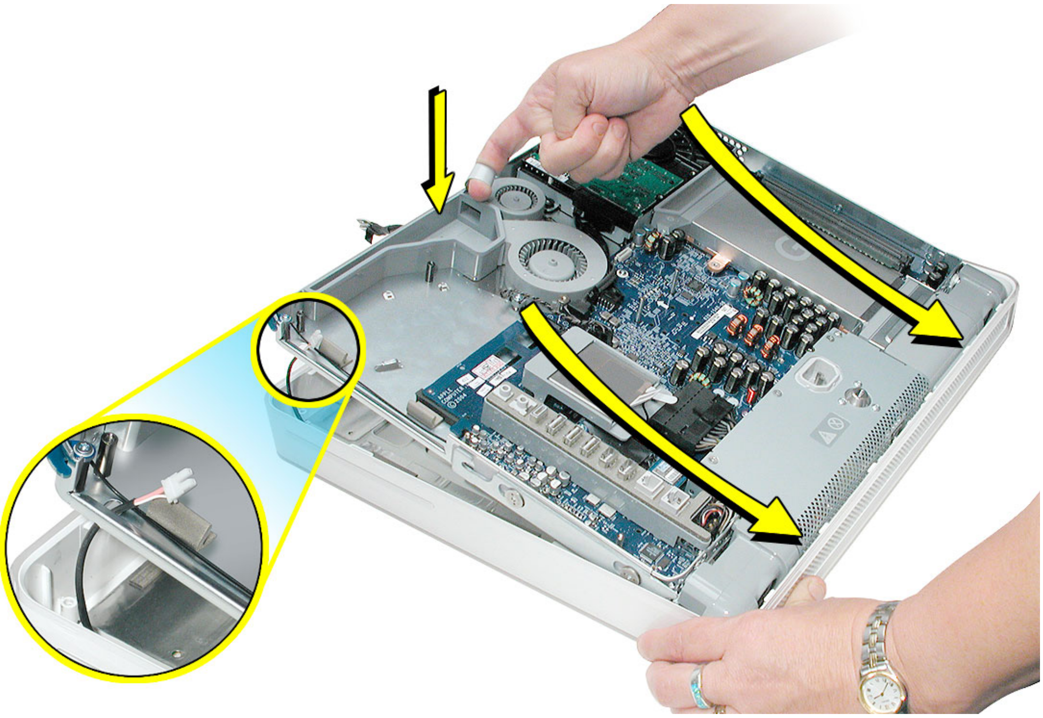
3. Make sure that the black video cable is tucked into the groove on the bezel as shown. A cutout on the midplane chassis lines up with the groove on the display/bezel housing.



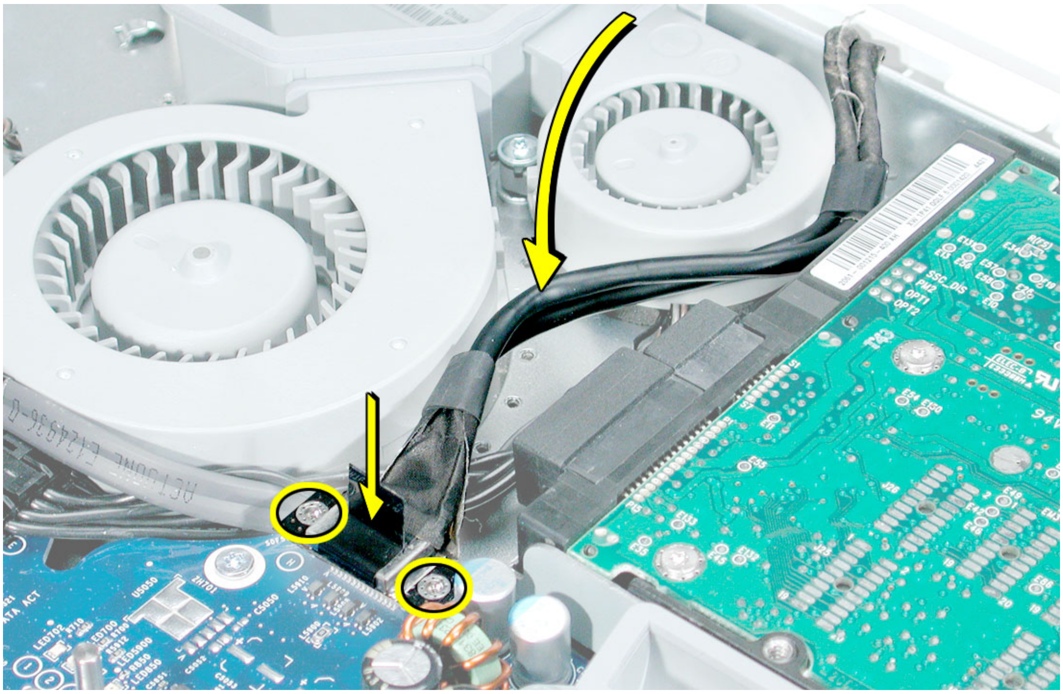
4. Locate the midplane. assembly that you set aside previously.



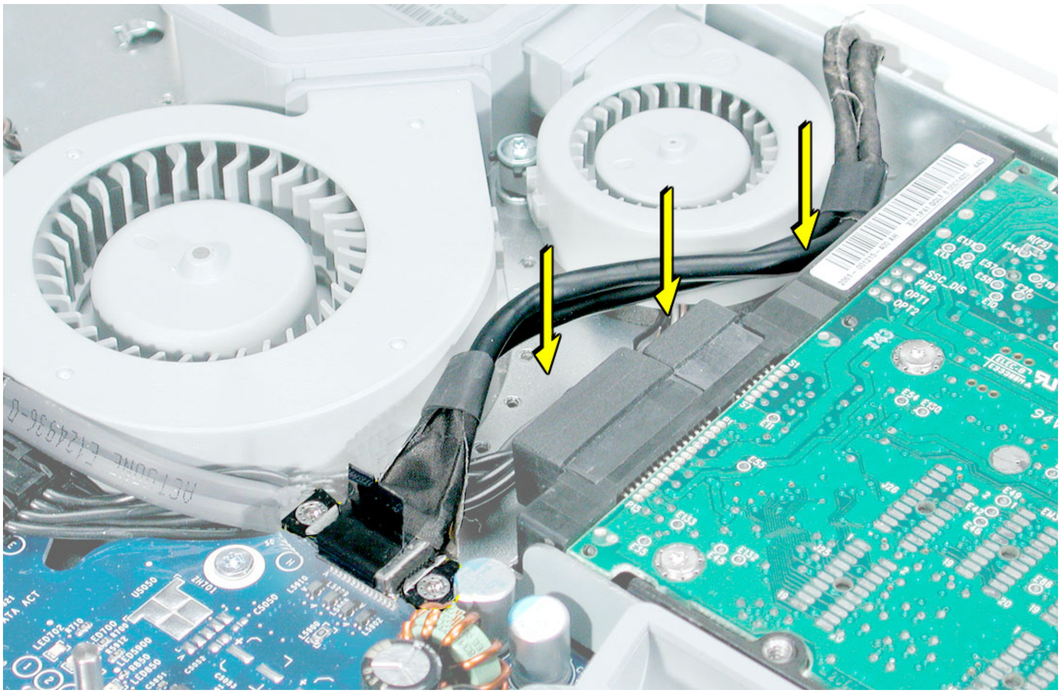
5. Lower the midplane into the display/bezel assembly housing. Use the tab to lower and adjust the midplane into the housing. As you lower the midplane, pull the inverter cable through the opening in the chassis.



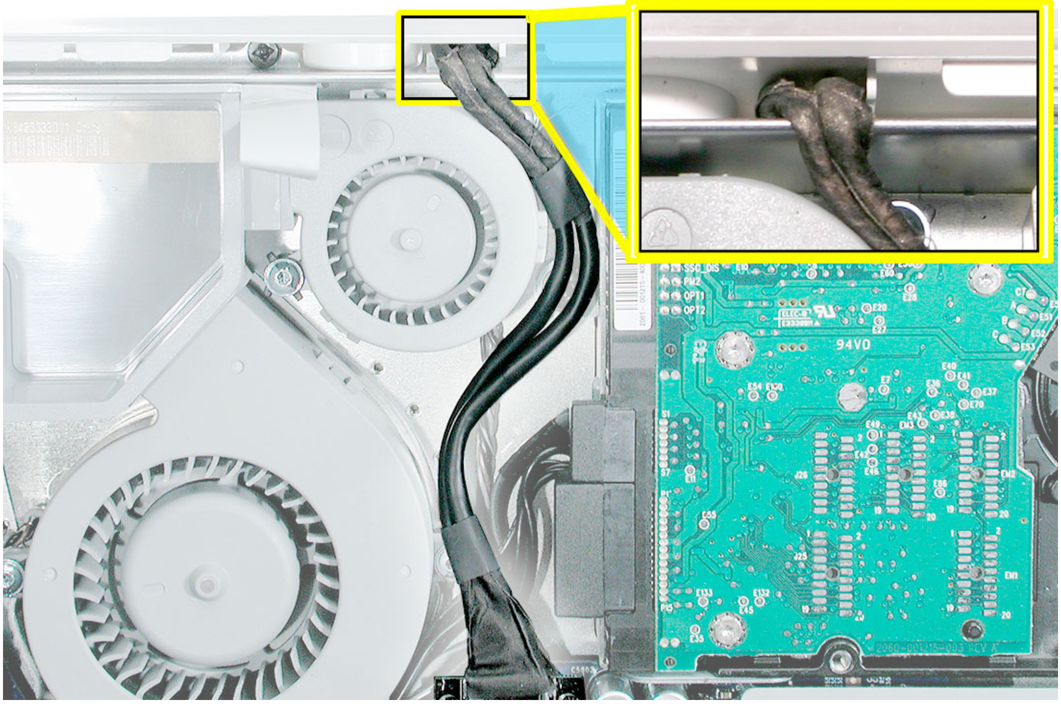
4. Connect the black video cable to the board and replace the two screws.



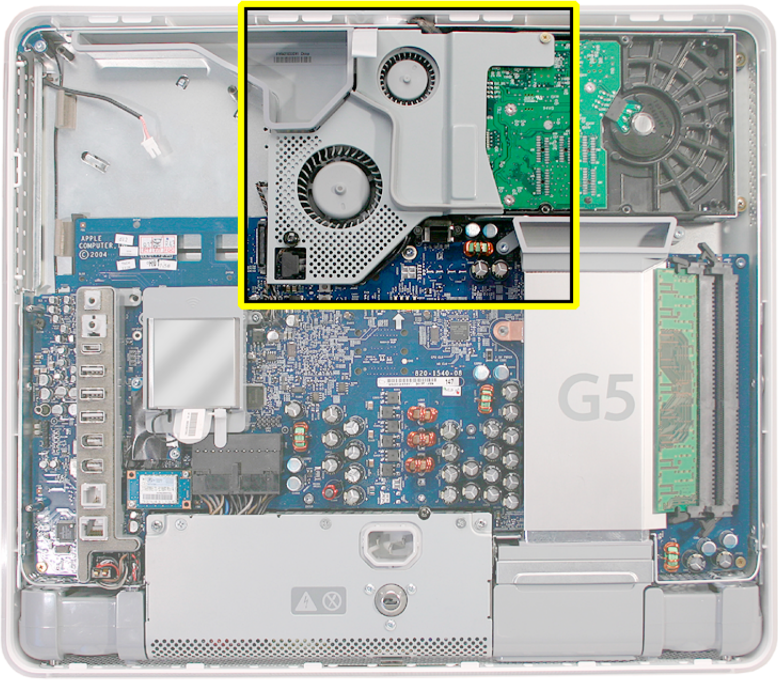
5. Tuck the video cable into the area shown by the arrows.



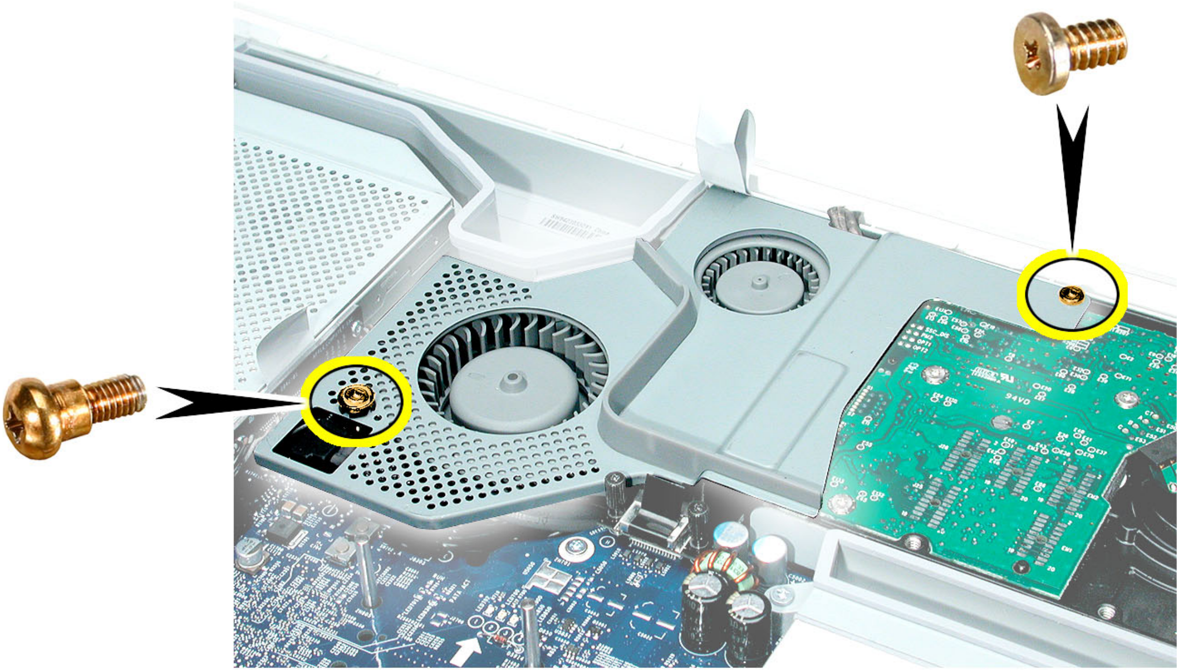
6. Press the video cable into the notch on the midplane chassis.



7. Replace the fan cover.

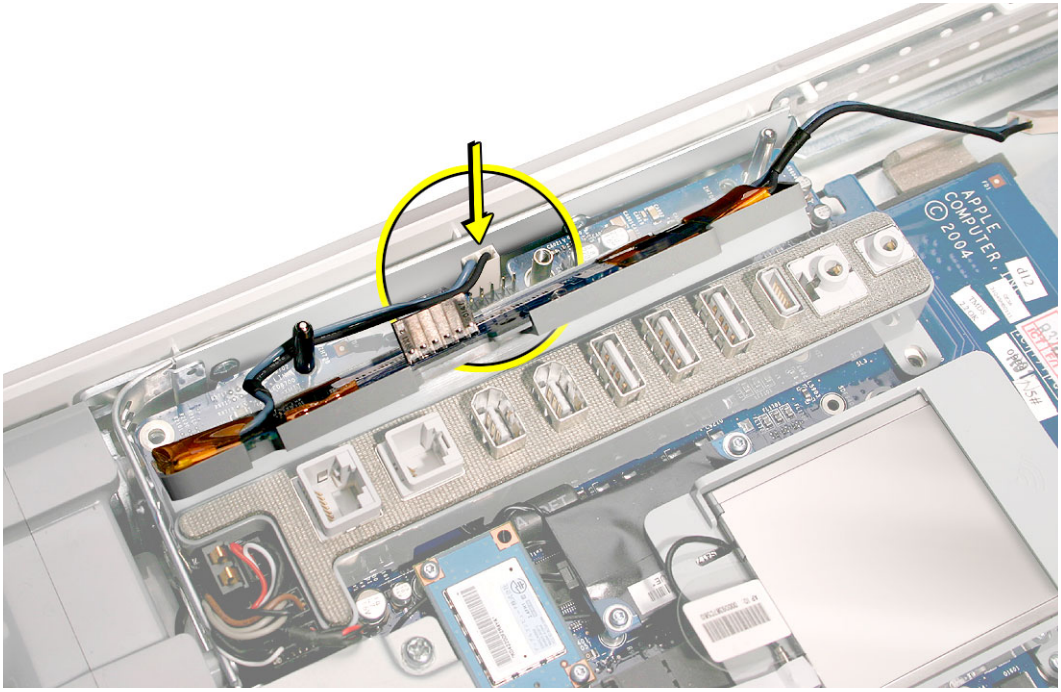


8. Replace the two fan cover screws; the larger fan cover screw attaches on the left side.
Note: Make sure the pull tab is sticking up as shown.

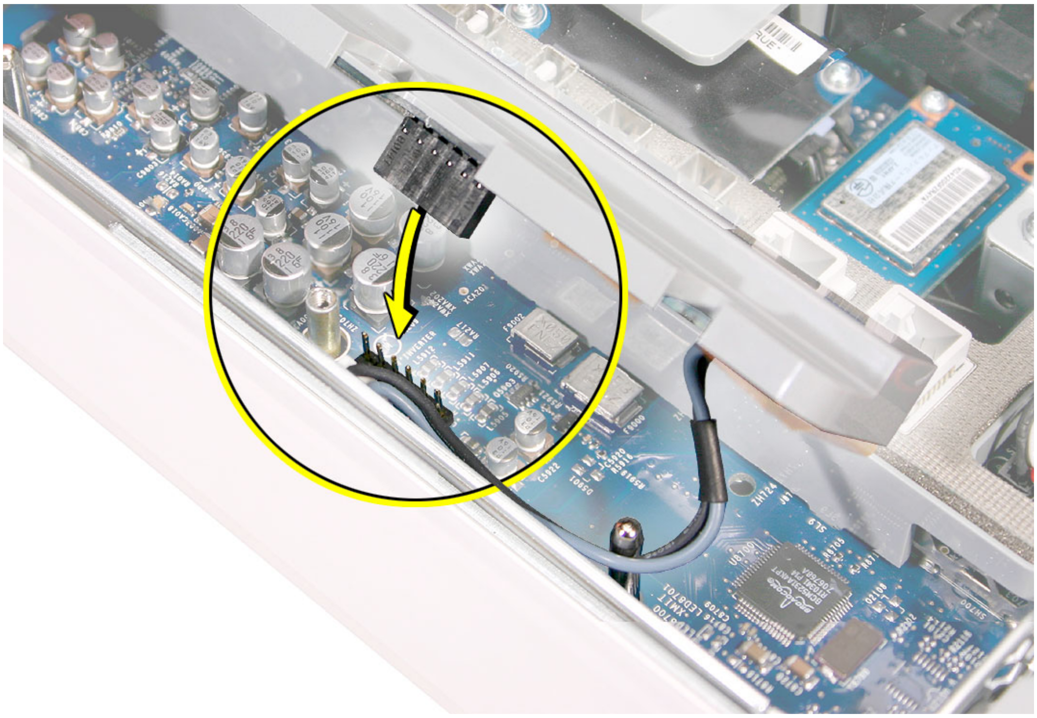


9. Locate the inverter board that you set aside.

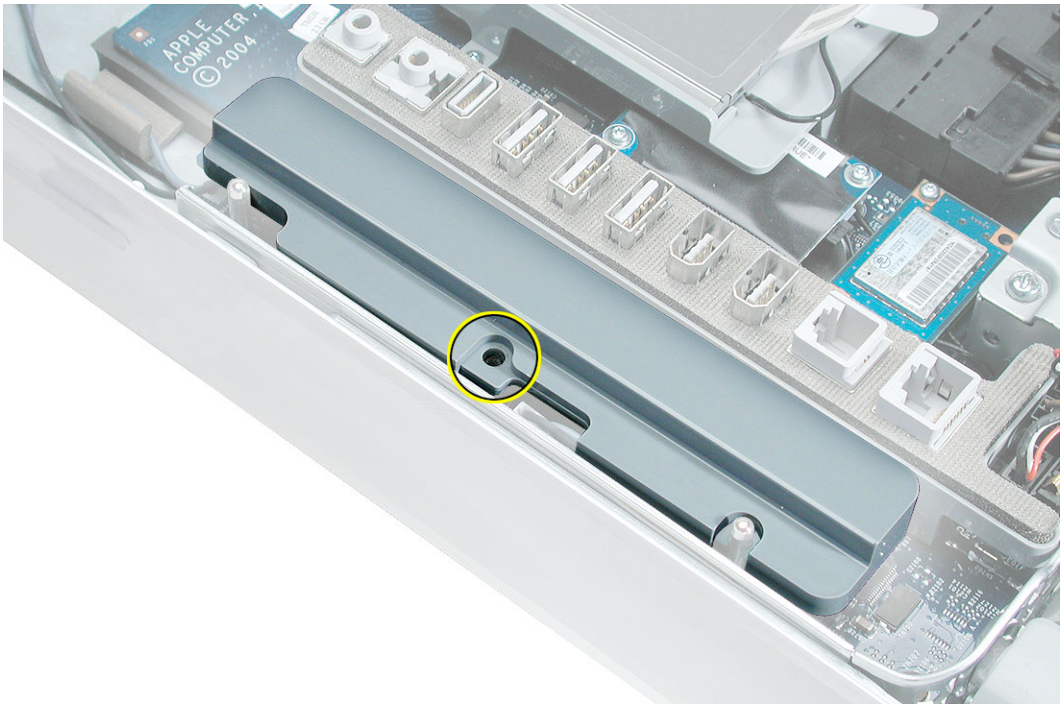
10. Connect the white connector on the inverter board to the main board. Route this cable around the silver post (as shown). **Caution:** Be careful not to bend the pins or prick your fingers on the pins located next to the white connector.



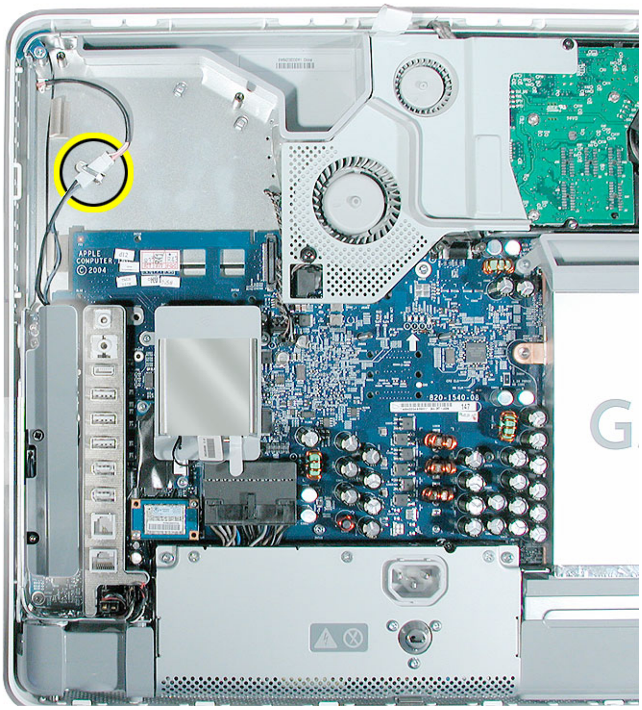
11. As you lower the inverter into place, connect the black connector to the pins on the board. Use the tall silver pins as a guide to align the inverter. **Important:** Make sure the connector mates with the pins. Double check that it's connected.



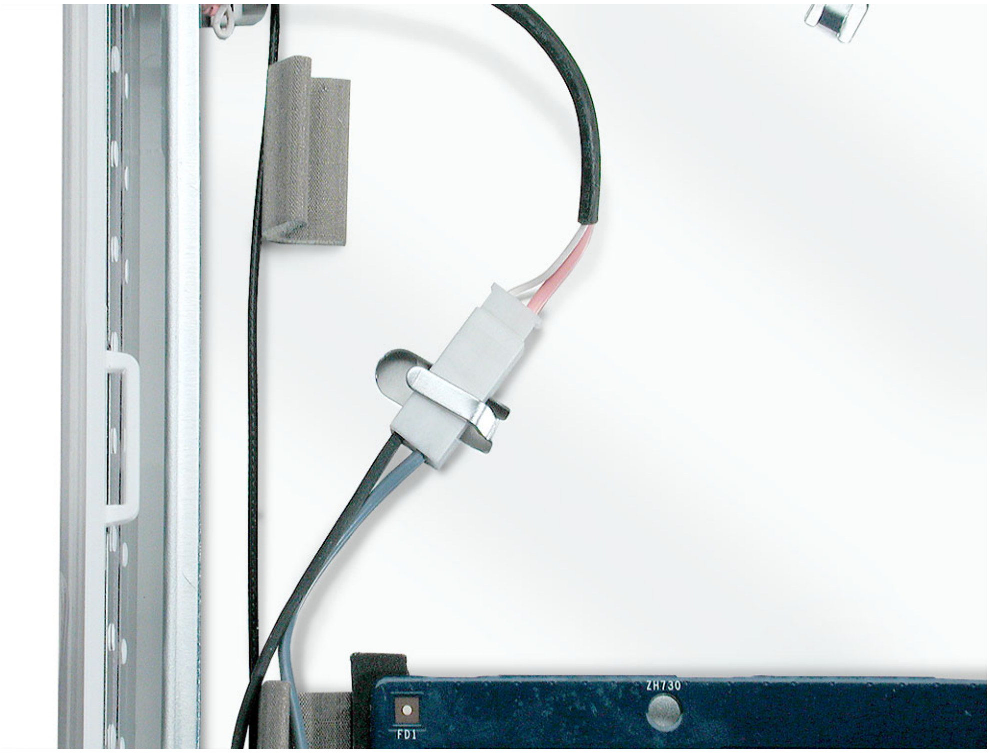
4. Replace the inverter screw.



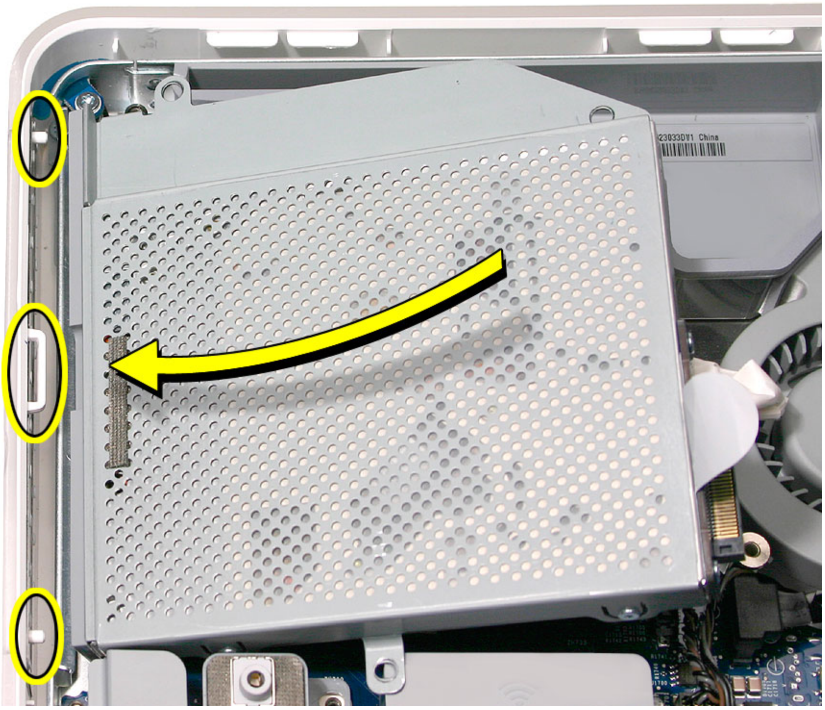
5. Reconnect the inverter-to-display panel cable. **Important:** The connector is keyed (it fits together only one way).



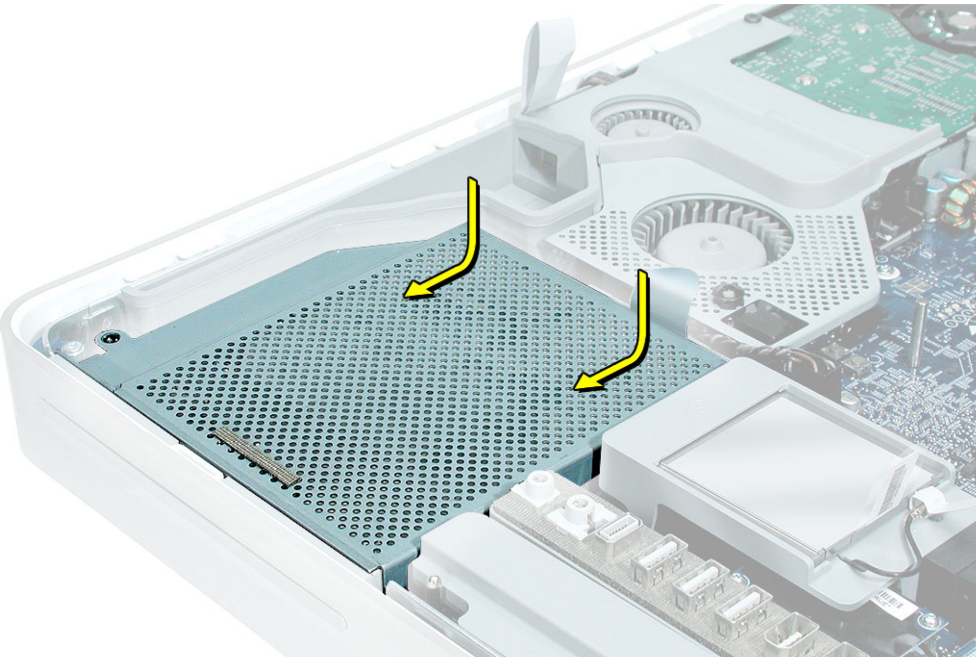
6. Secure the connector under the metal tab.



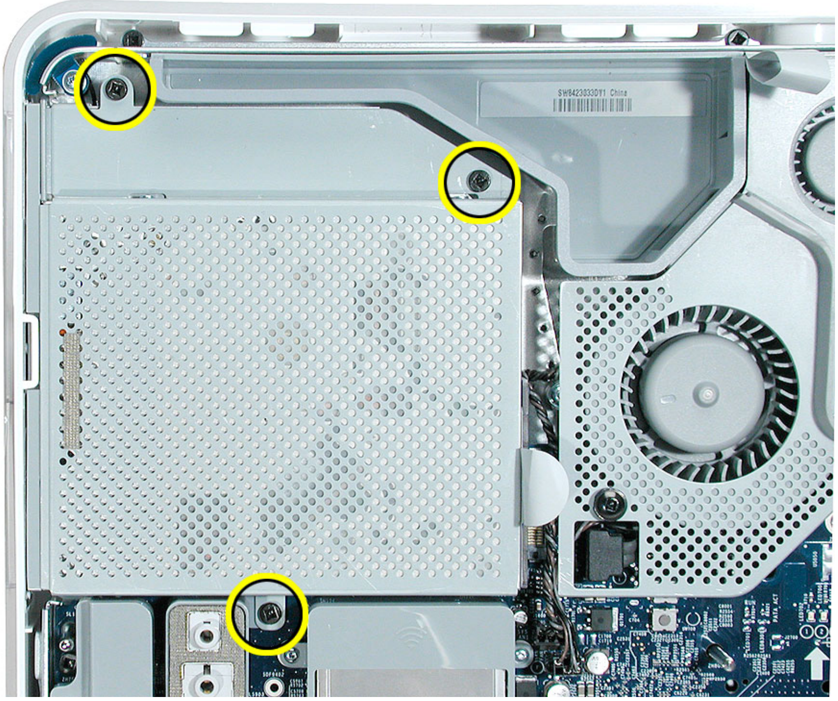
7. Locate the optical drive that you set aside. Holding the optical drive by the back end (near the tab), insert the drive at an angle to mate the two white pins and the plastic rectangle with the two holes and notch on the optical drive.



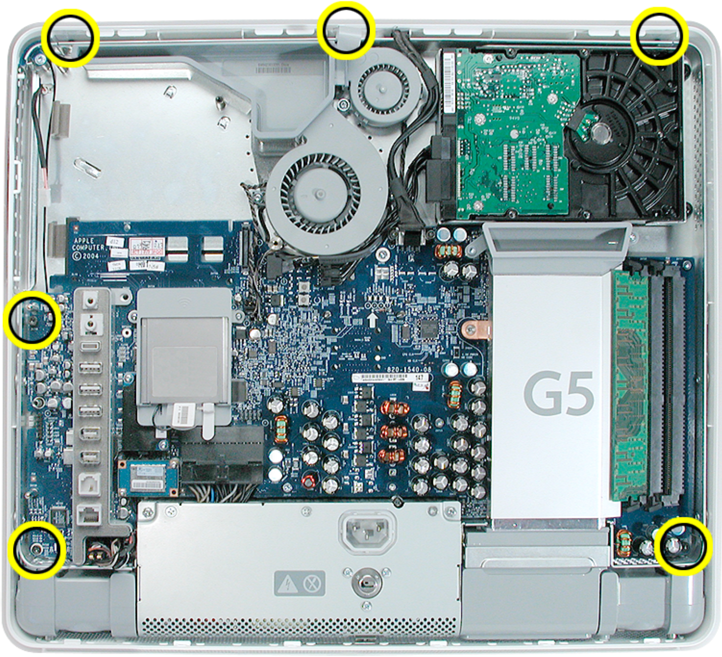
8. With your thumb on the tab and your index finger behind the tab, push the drive forward and down. The optical drive should click into its connector. **Note:** If the optical drive won't click into place, check that the fan cables are not obstructing the optical drive connector.



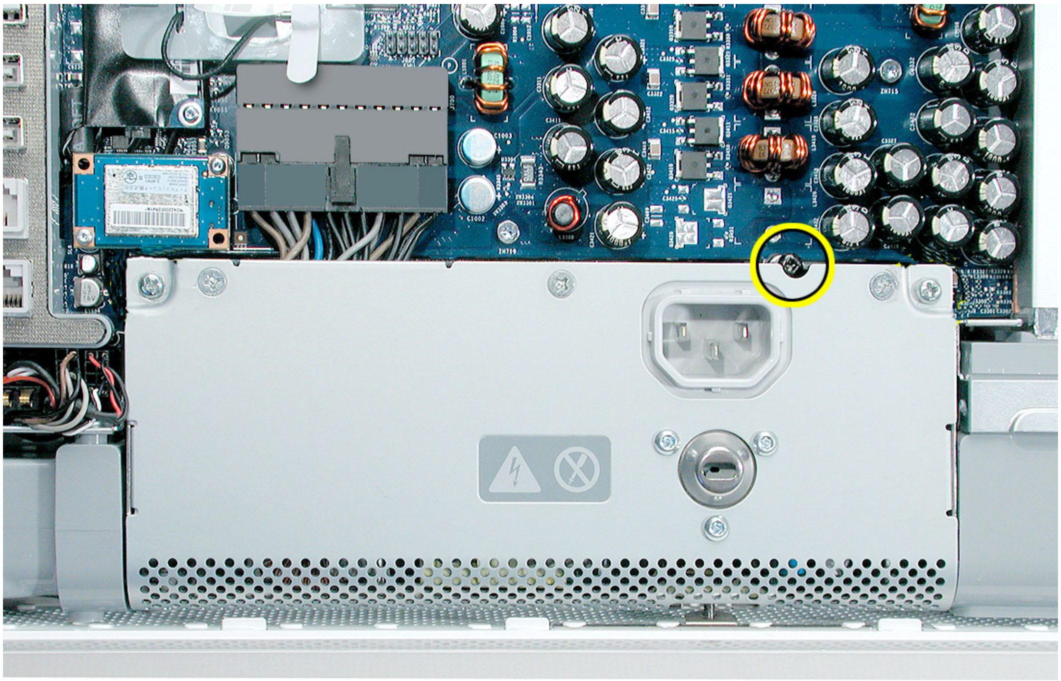
9. Replace the three optical drive screws.



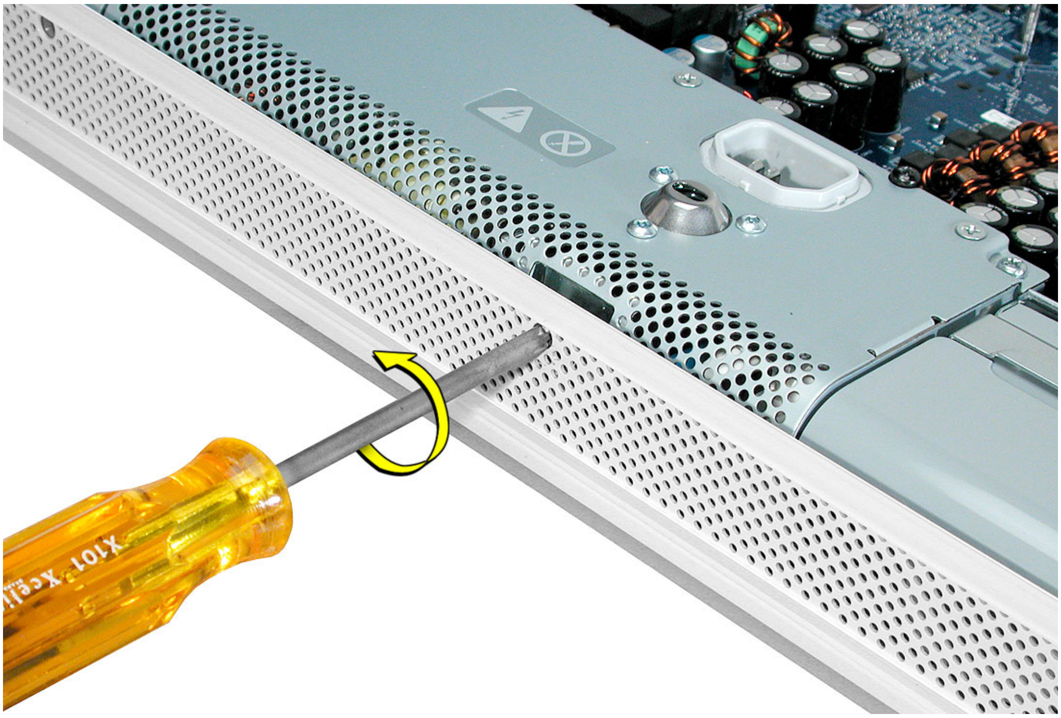
10. Replace the six case screws, (The shorter screws attach along the top.).



11. Tighten the power supply screw five to eight revolutions.



12. Turn the middle case screw counterclockwise about five revolutions. This step prepares the back cover to be installed and secured



Display/Bezel, No Optical Slot

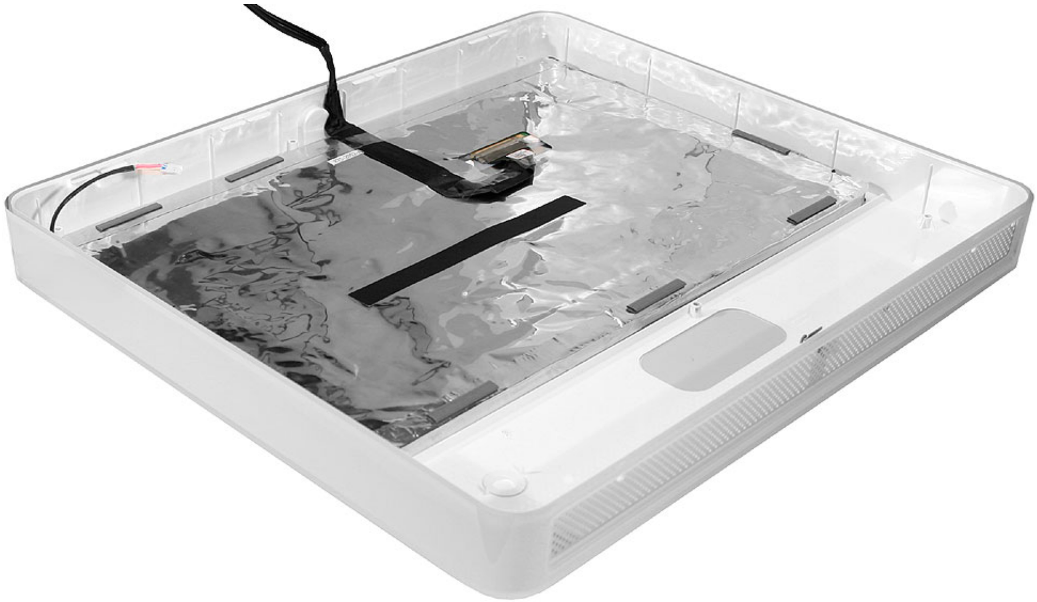
Tools Required

- Use the tool provided, or a Phillips #1 screwdriver, preferably with a magnetized tip
- Screw tray or something equivalent to hold the screws

Preliminary Steps

Before you begin, remove the cover.

Part Location

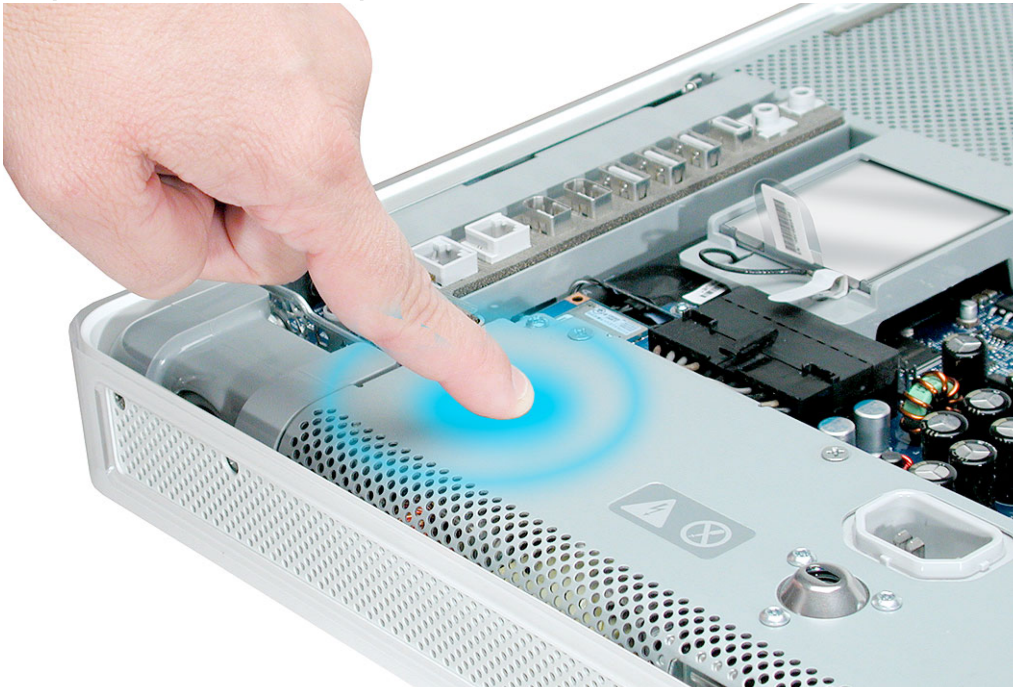


Removing theDisplay/Bezel, No Optical Slot

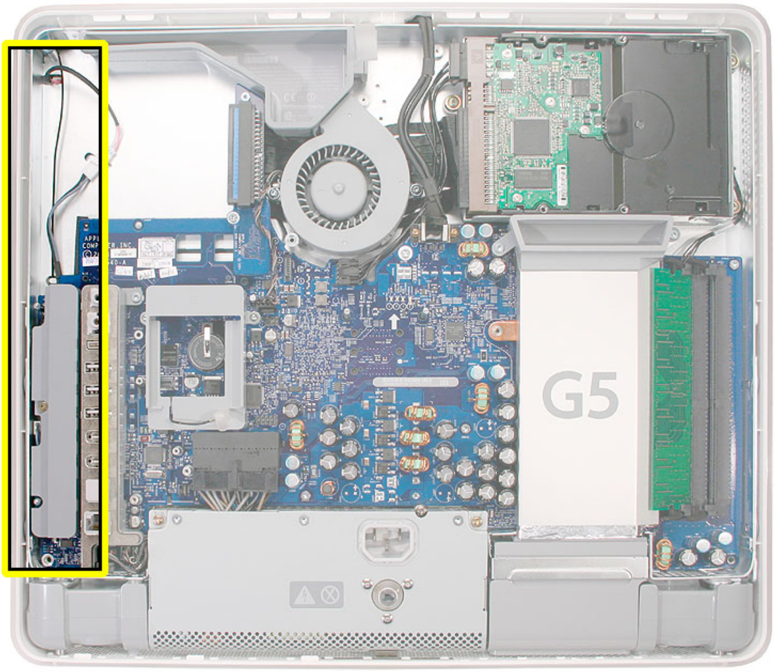
1. To access the midplane assembly you must first remove other service modules. This procedure will show you how to remove and replace these modules. **Note:** As you remove each module, set it aside, along with the screws for that module.

2. Ground yourself. Touch the metal surface (as shown below) on the inside of the computer to discharge any static electricity.

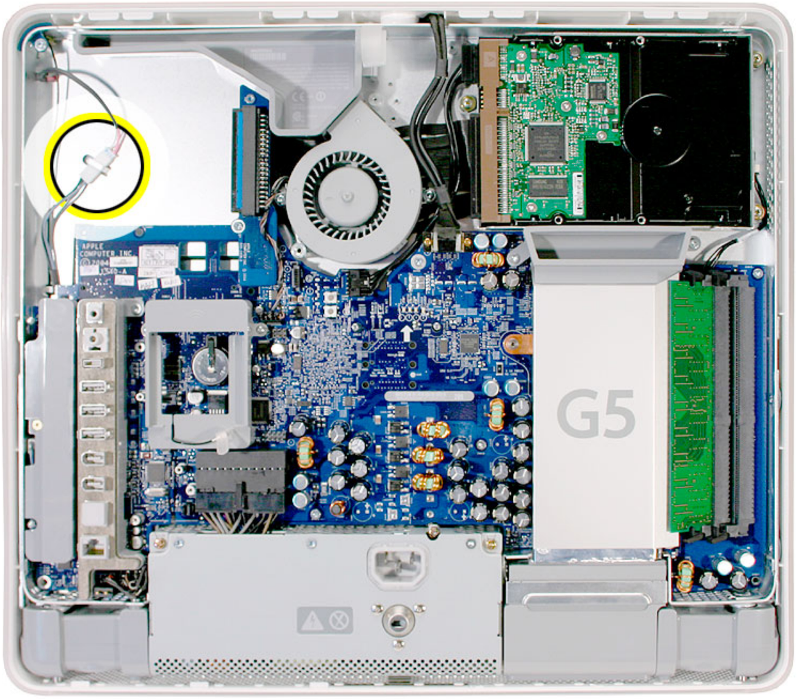
   Warning: Always discharge static electricity before you touch any parts or install any components inside the computer. To avoid generating static electricity, do not walk around the room until you have finished installing the part and closed the computer.



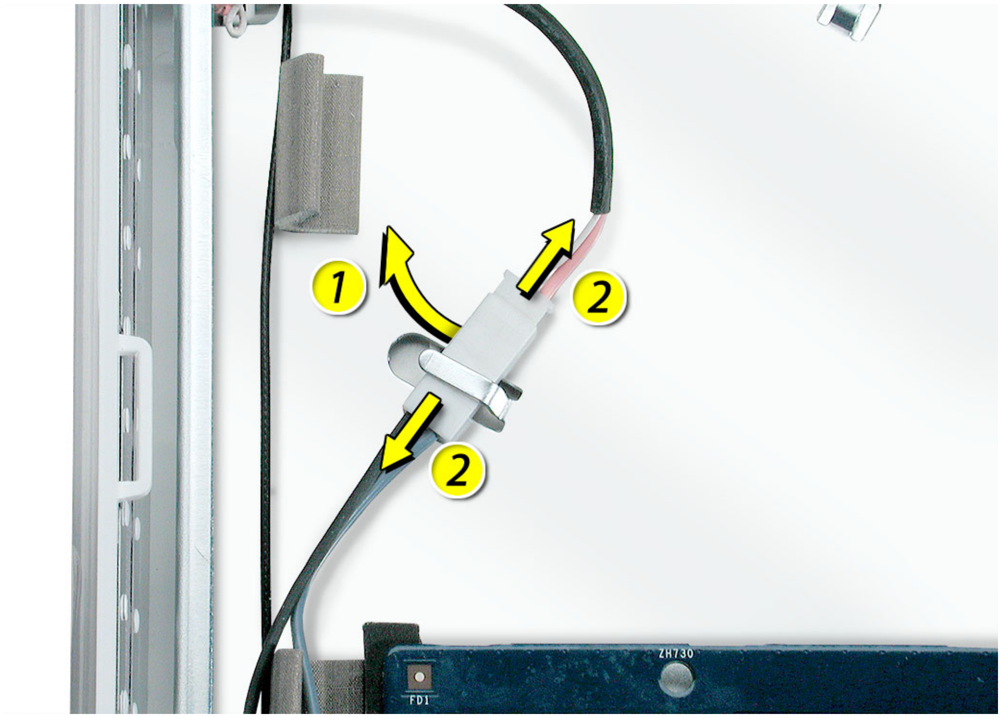
3. Locate the inverter on the left side of the computer.



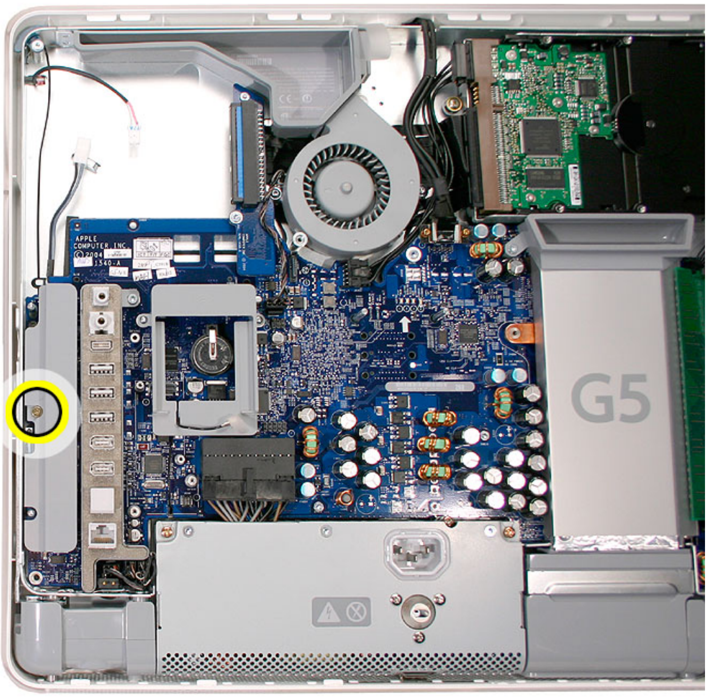
4. Locate the inverter-to-display panel cable connector.



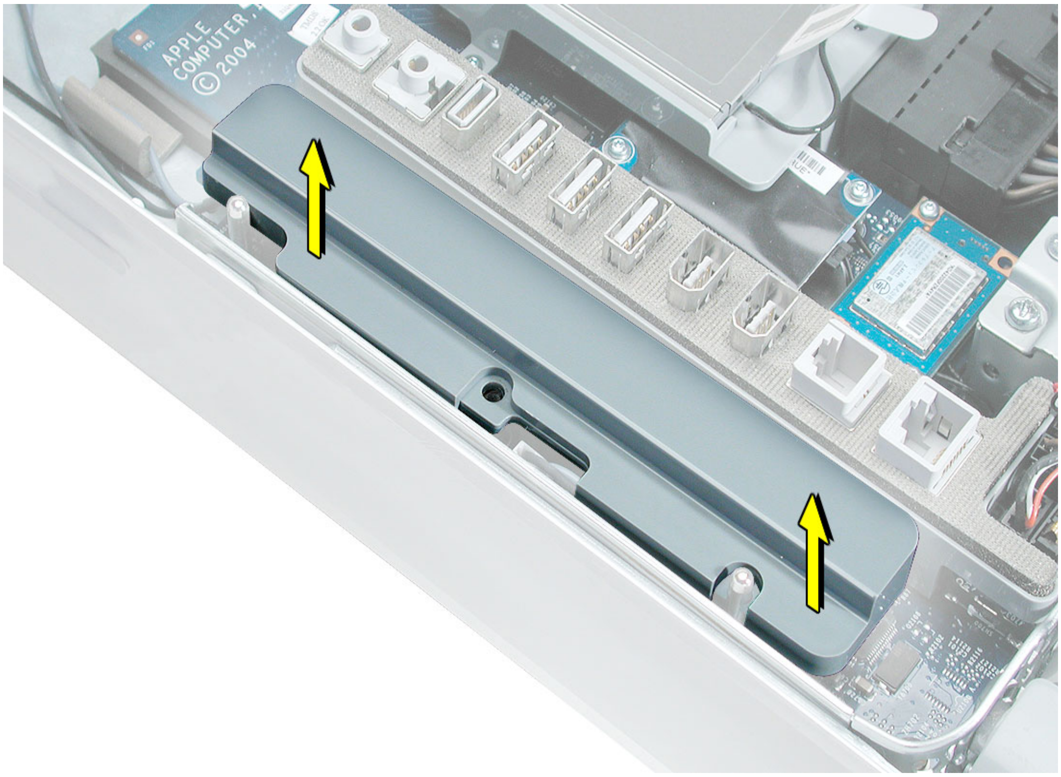
5. Release the cable from the clip. Disconnect the cable connector.



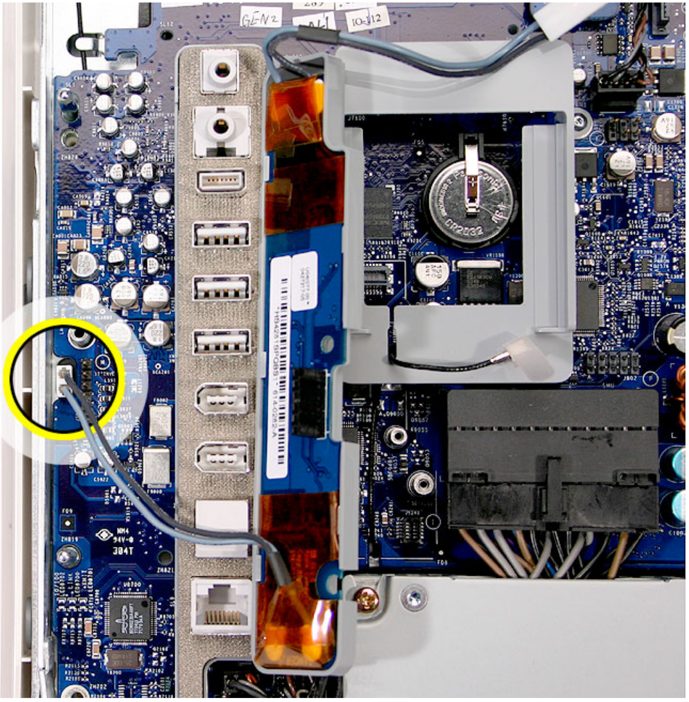
4. Using the tool provided, or a Phillips #1 screwdriver, remove the inverter screw.



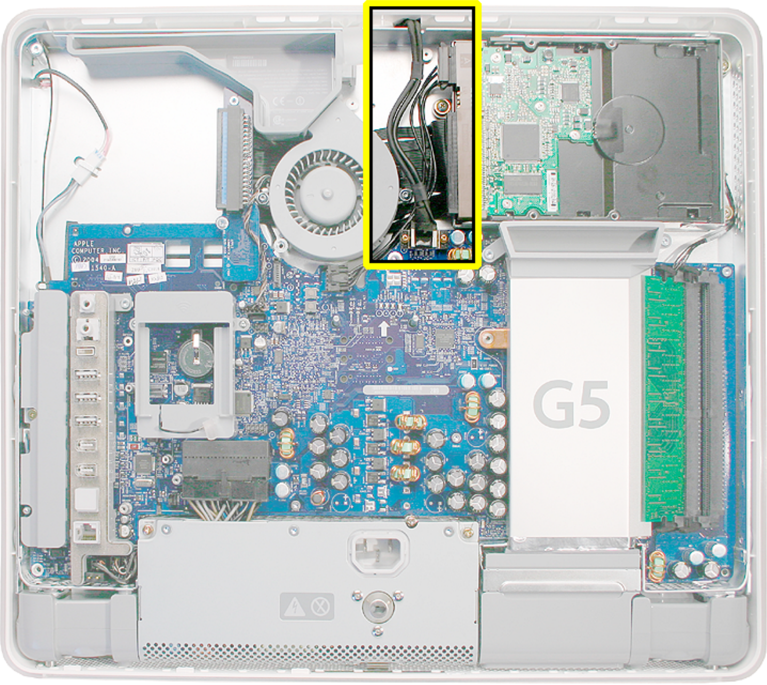
5. Lift the inverter straight up to disconnect the inverter board.



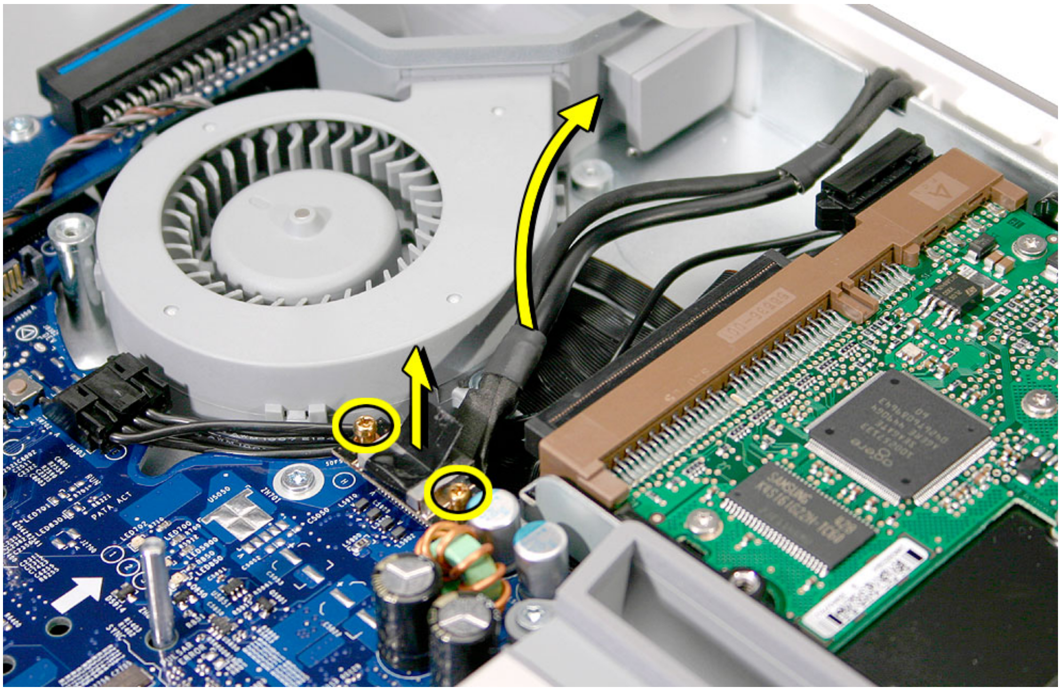
6. Disconnect the white connector (circled below) on the inverter by pulling it straight up. Set the inverter board aside.
   Note: Be careful not to prick your fingers on the pins next to the white connector.



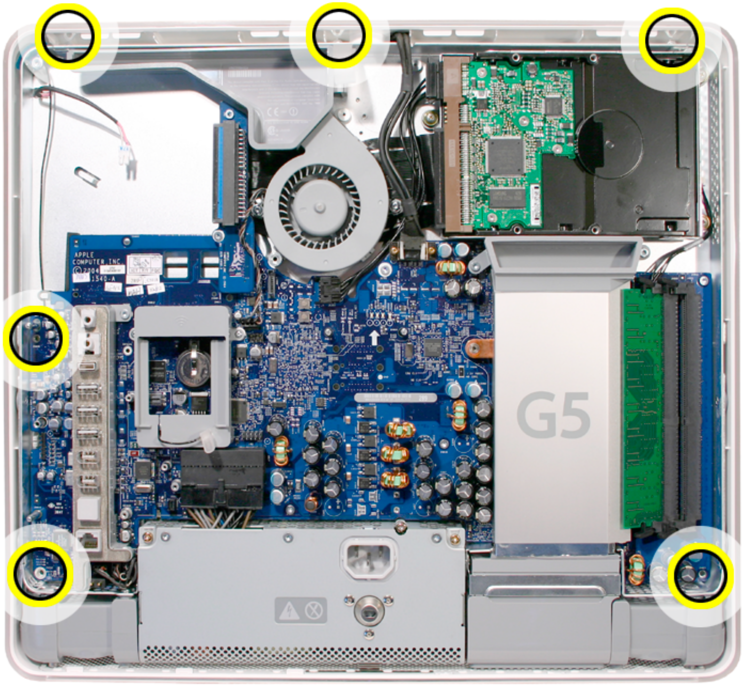
7. Locate the black video cable at the top of the computer.



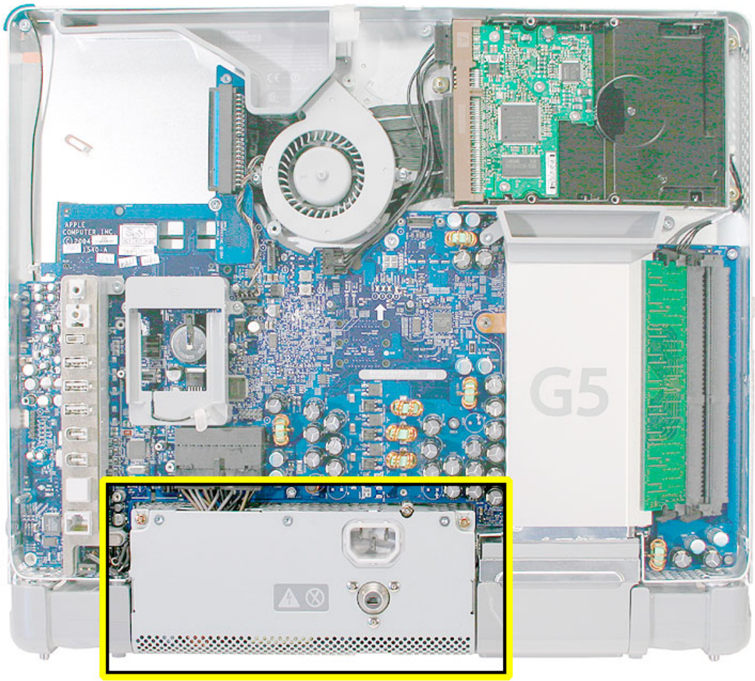
4. Remove the two screws on the video cable and set them aside. Pull up on the black tab to disconnect the cable. Flip the cable back, so it is out of the way..



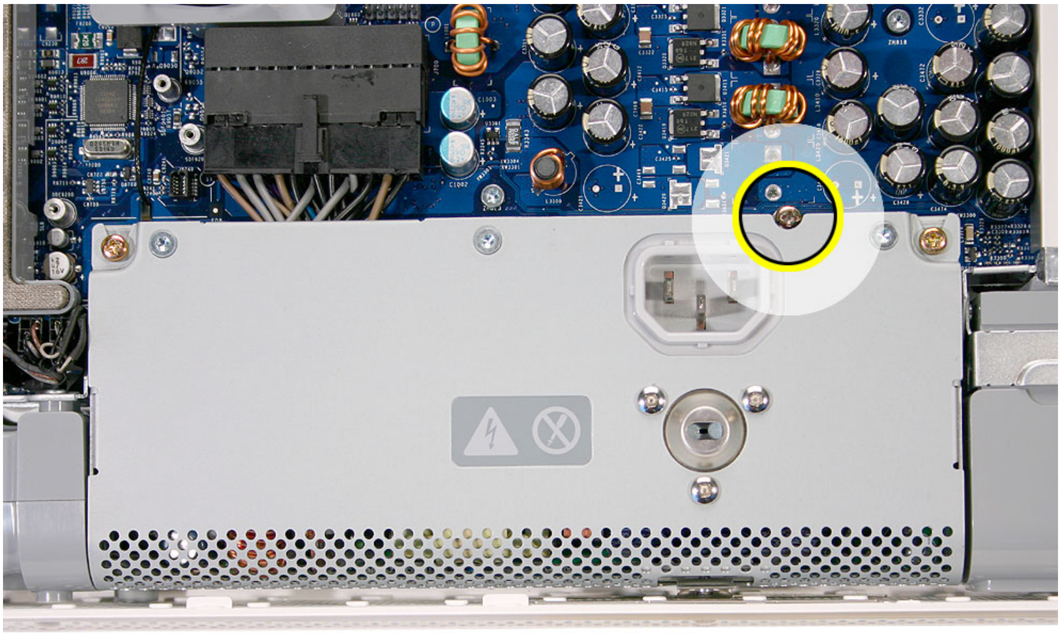
4. Using the Phillips screwdriver, remove six screws that attach the midplane to the display panel housing. Three screws are located along the top of the case and the remaining screws are on the midplane board. Set the screws aside



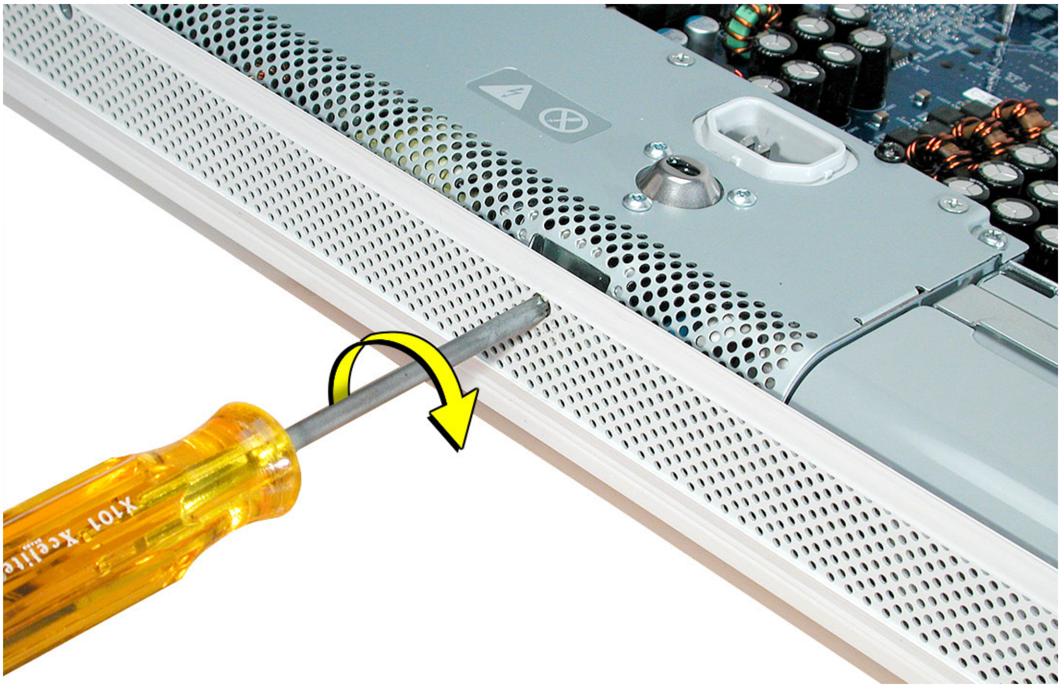
5. Locate the power supply at the bottom of the picture below.



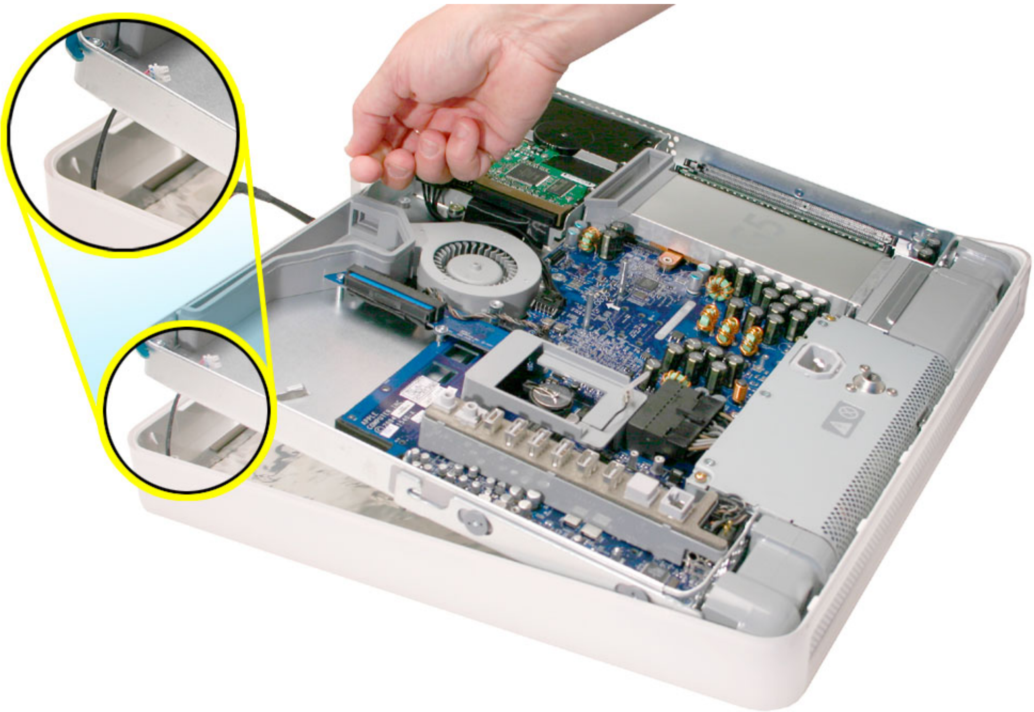
6. Loosen the captive power supply screw (circled below) by turning it counterclockwise. Loosen the screw until it is flush with the top of the power supply. The screw is captive; it will not come out. **Note:** You do not need to remove the power supply yet.



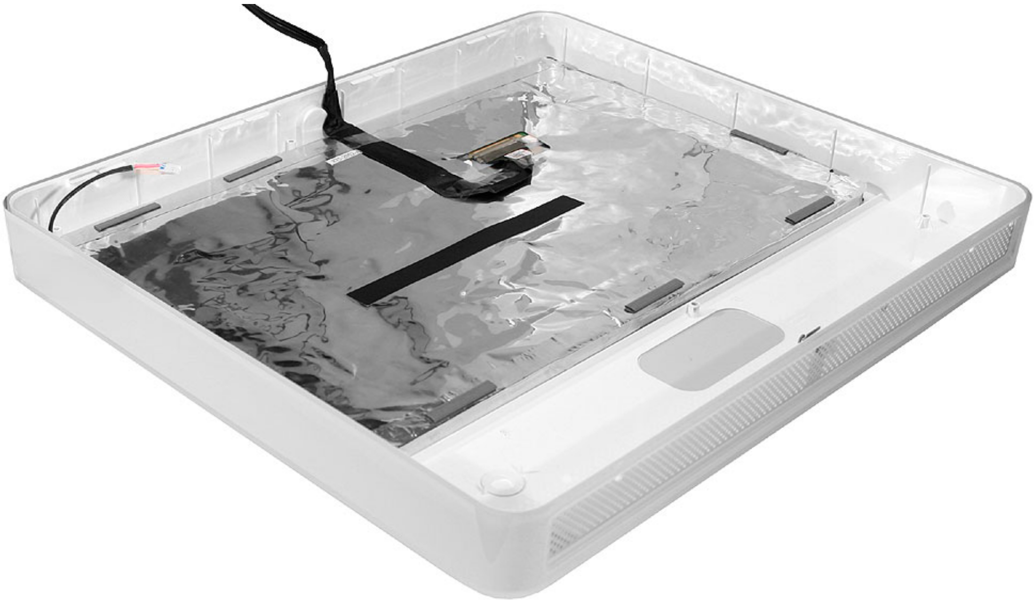
7. Turn the middle case screw clockwise about five revolutions. This releases a screw clamp that holds the power supply in the display/bezel assembly.



8. Locate the pull tab at the top of the computer. Pull the tab up to release the midplane assembly from the display/bezel. Pull the inverter cable (in the top left corner) down through the opening in the midplane. Set the midplane aside.



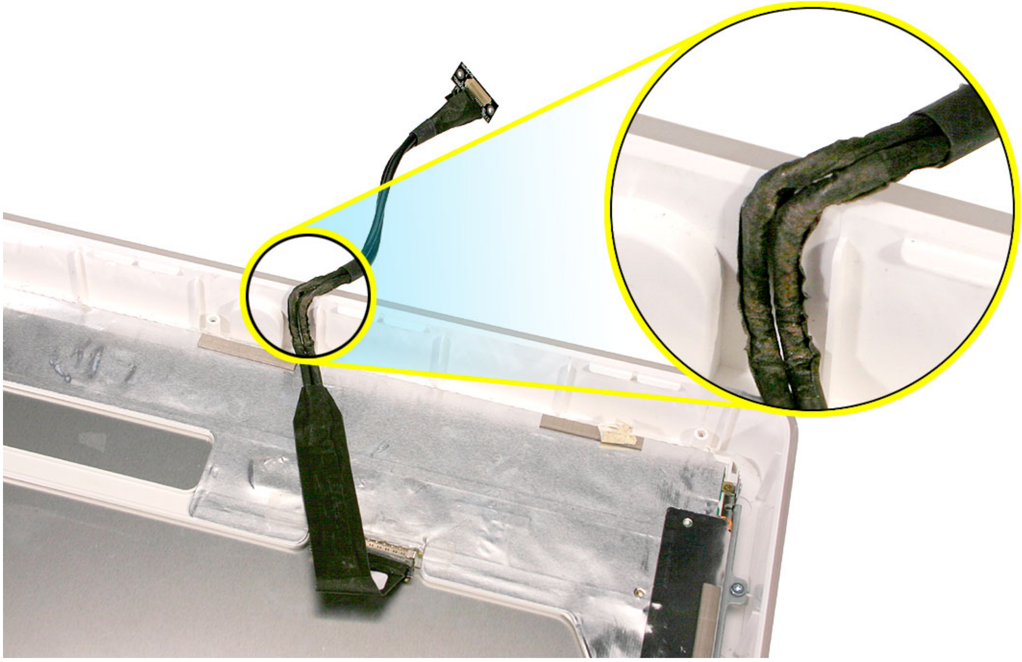
9. After removing the midplane you are left with the display/bezel service part shown below. **Important:** Return the original display/bezel to Apple in the packaging provided.



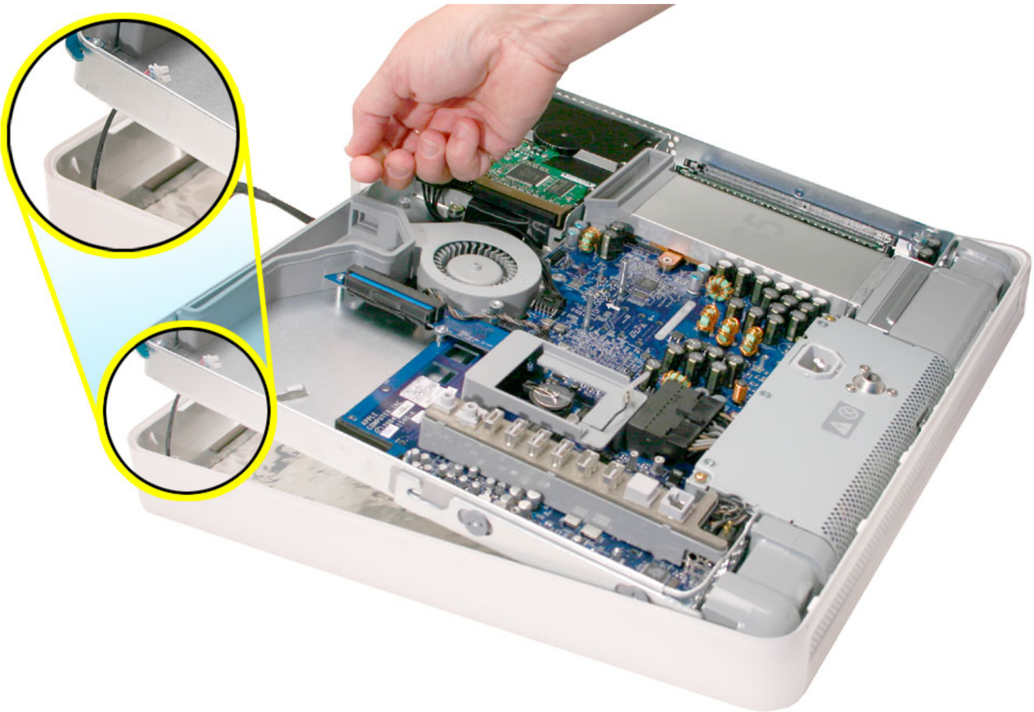
Replacing the Display/Bezel, No Optical Slot

1. Remove the replacement display/bezel assembly from its packaging.

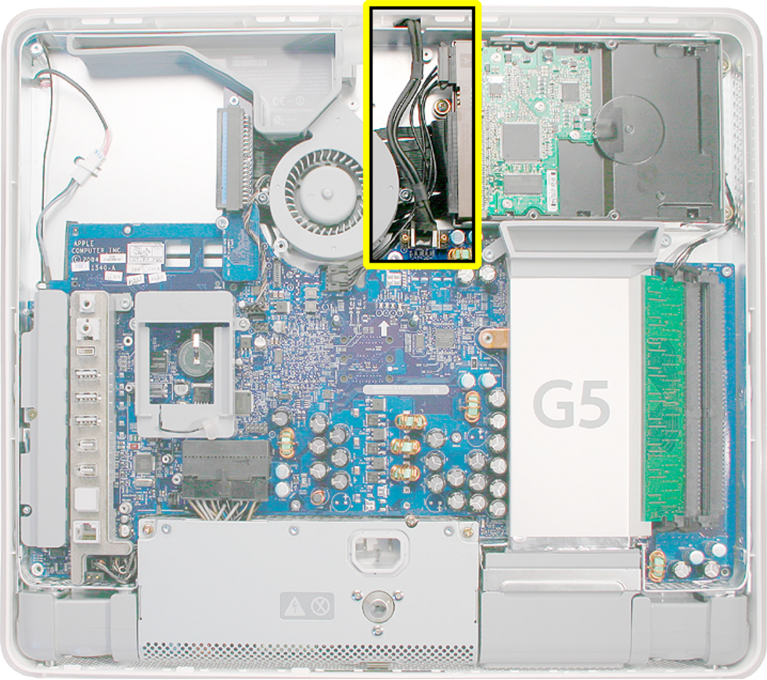
2. Make sure that the video cable is tucked into the groove on the display housing as shown. A cutout on the midplane chassis lines up with the groove on the display housing.



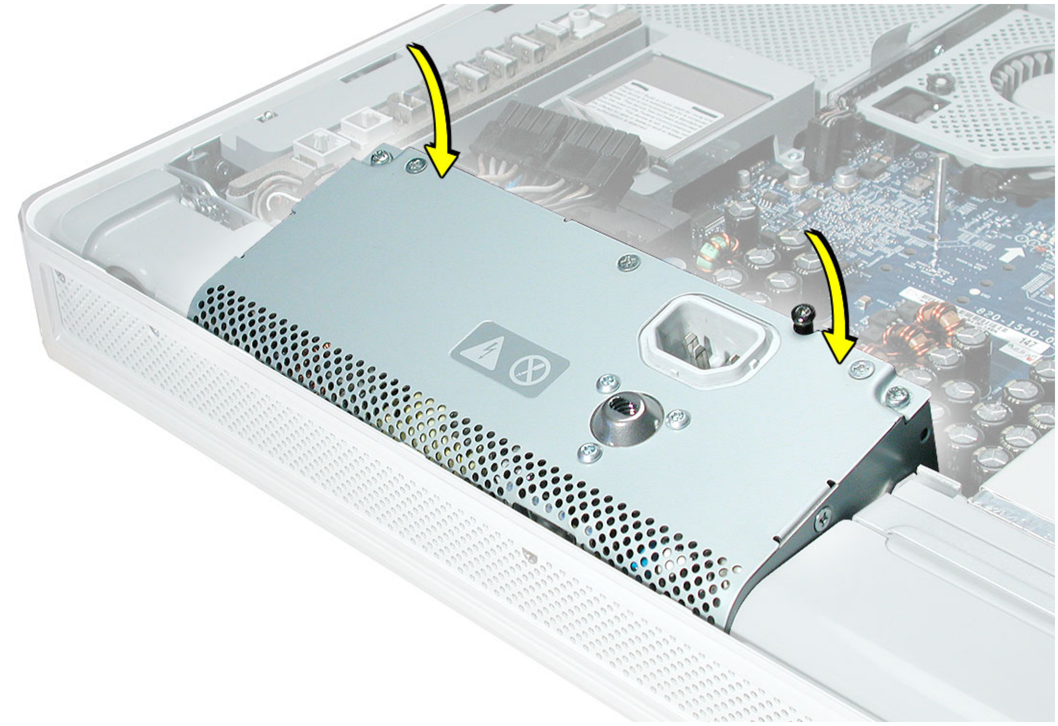
3. Locate the midplane. assembly that you set aside previously.
4. Hold the midplane by the sides and position it over the replacement display/bezel housing. Lower the midplane into the replacement display/bezel housing. As you lower the midplane, pull the inverter cable through the hole in the midplane.



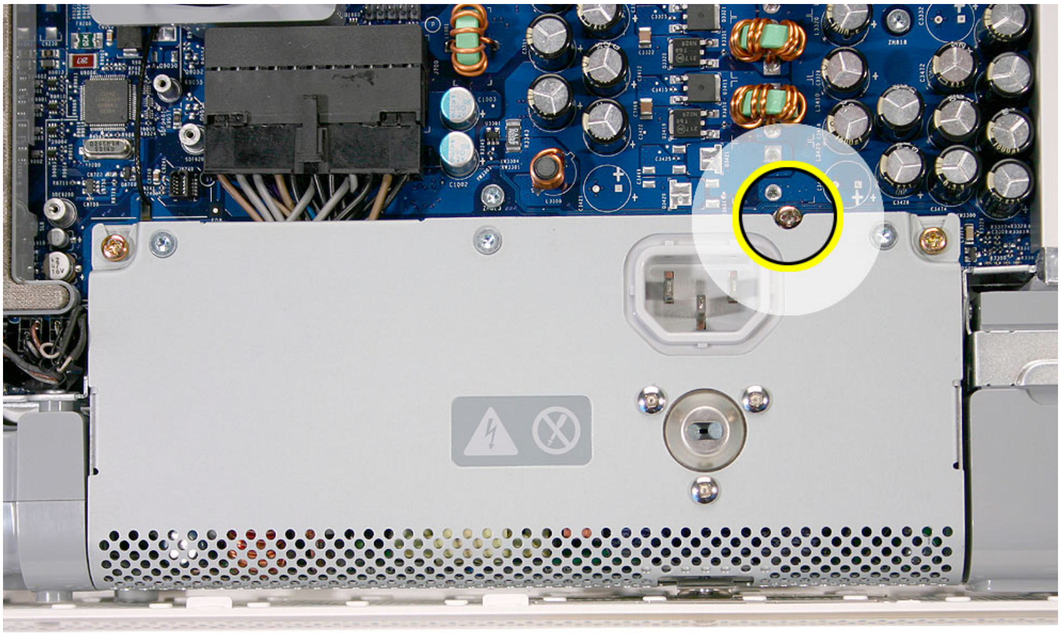
5. Reconnect the video cable and replace the two video cable screws.Tuck the video cable into the area next to the fan and hard drive.



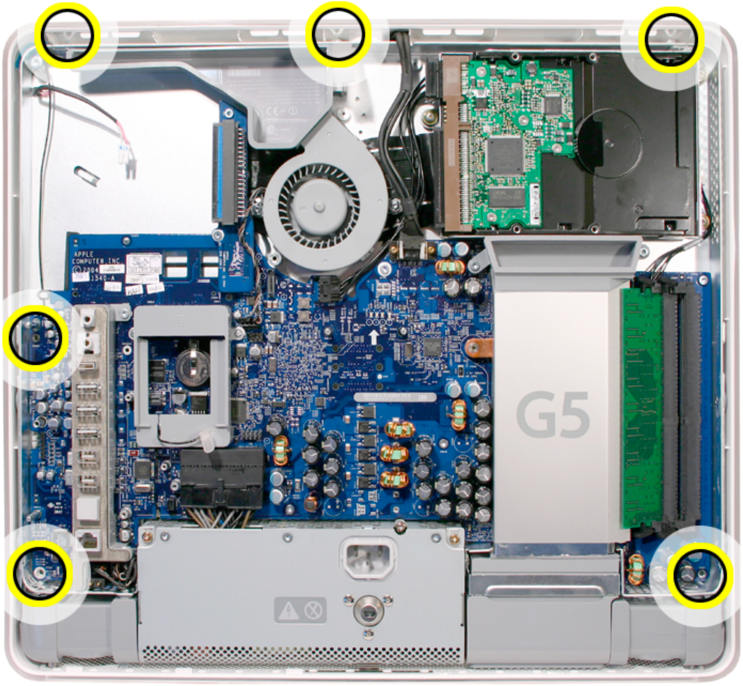
6. Lower the power supply into the midplane.



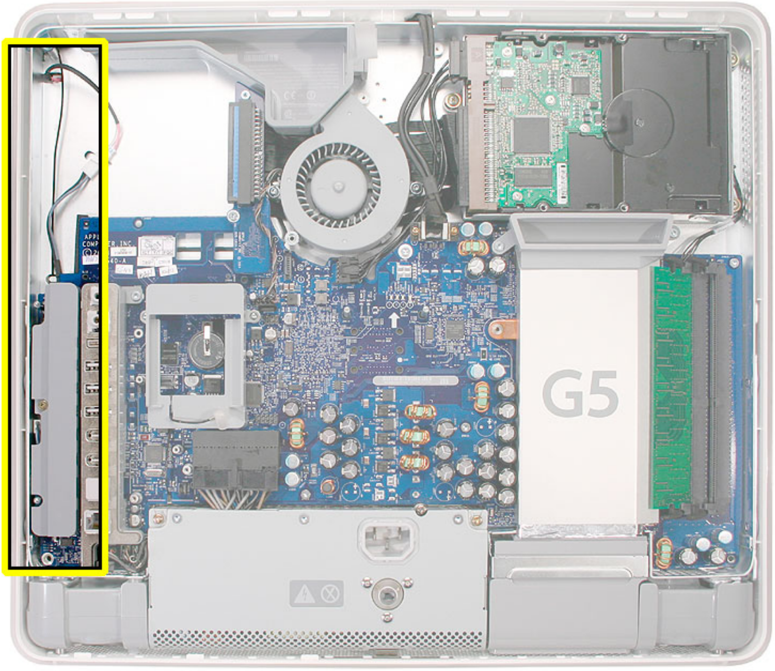
7. Tighten the captive screw on the power supply, turning it clockwise.



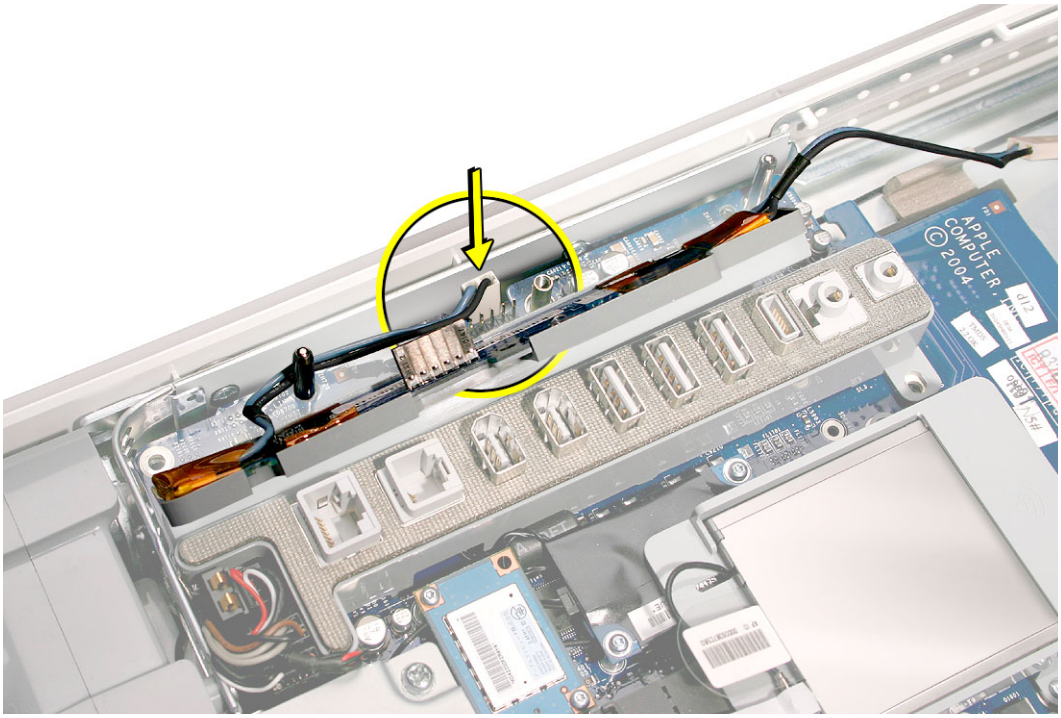
4. Replace the six case screws.The shorter screws attach along the top.



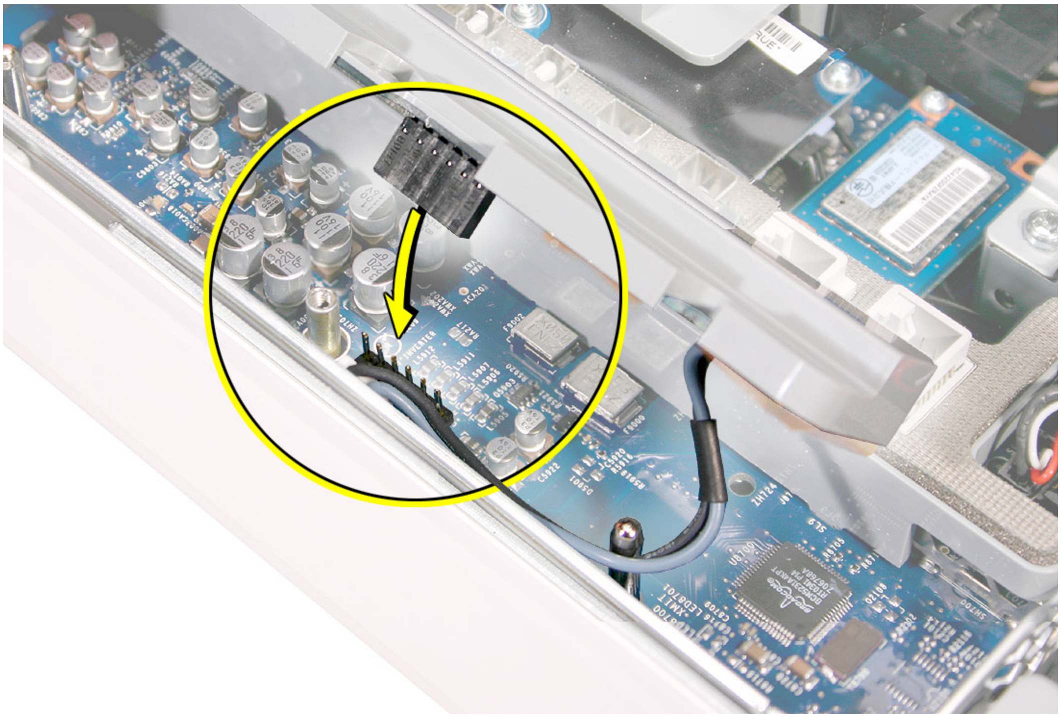
5. Locate the inverter board that you set aside.



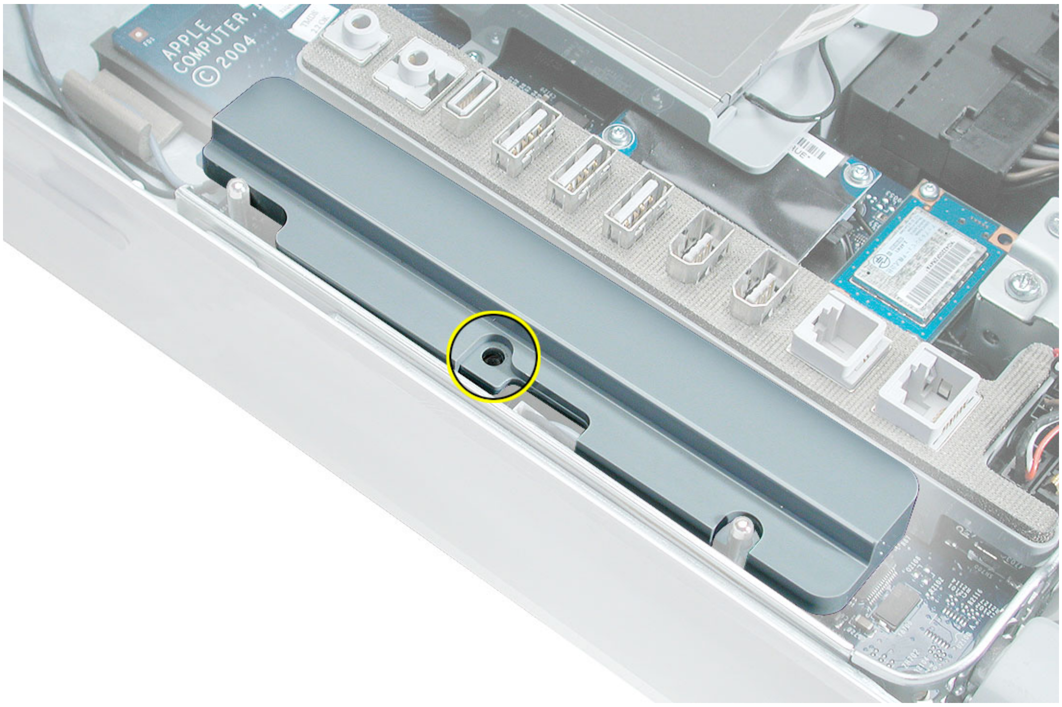
6. Connect the white connector on the inverter board to the main board. Route this cable around the silver post (as shown). **Caution:** Be careful not to bend the pins or prick your fingers on the pins located next to the white connector.



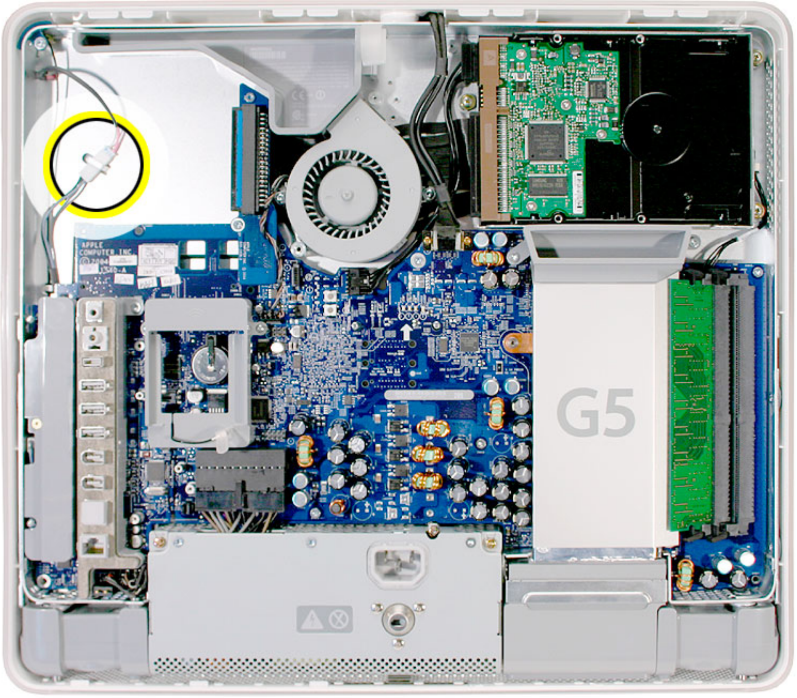
7. As you lower the inverter into place, connect the black connector to the pins on the board. Use the tall silver pins as a guide to align the inverter. **Important:** Make sure the connector mates with the pins. Double check that it’s connected.



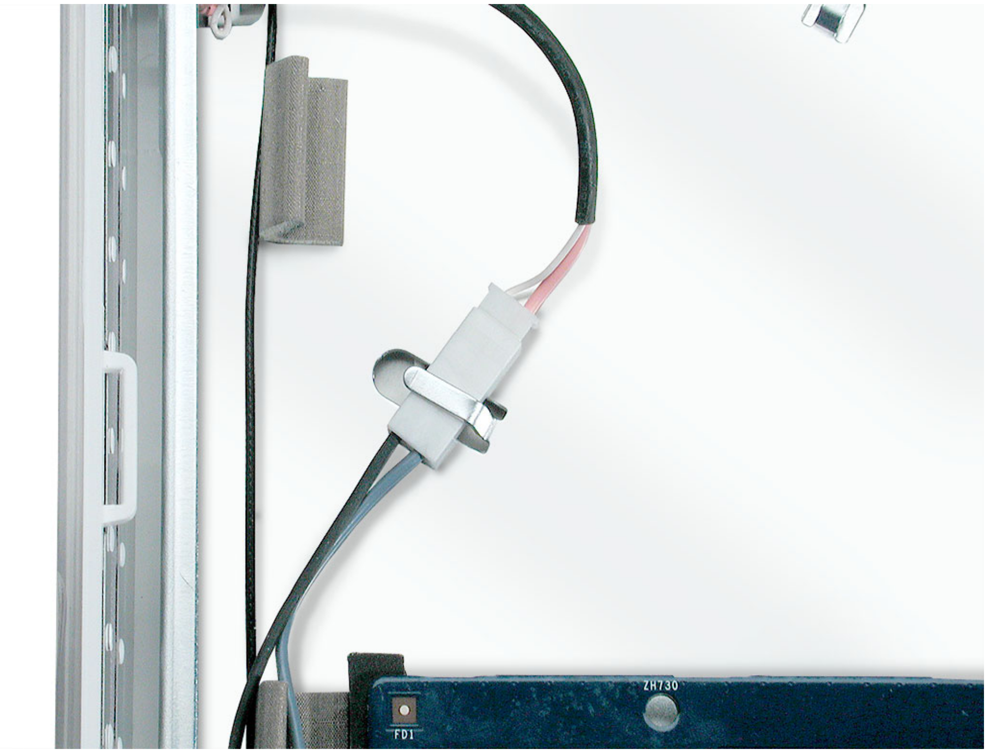
8. Replace the inverter screw.



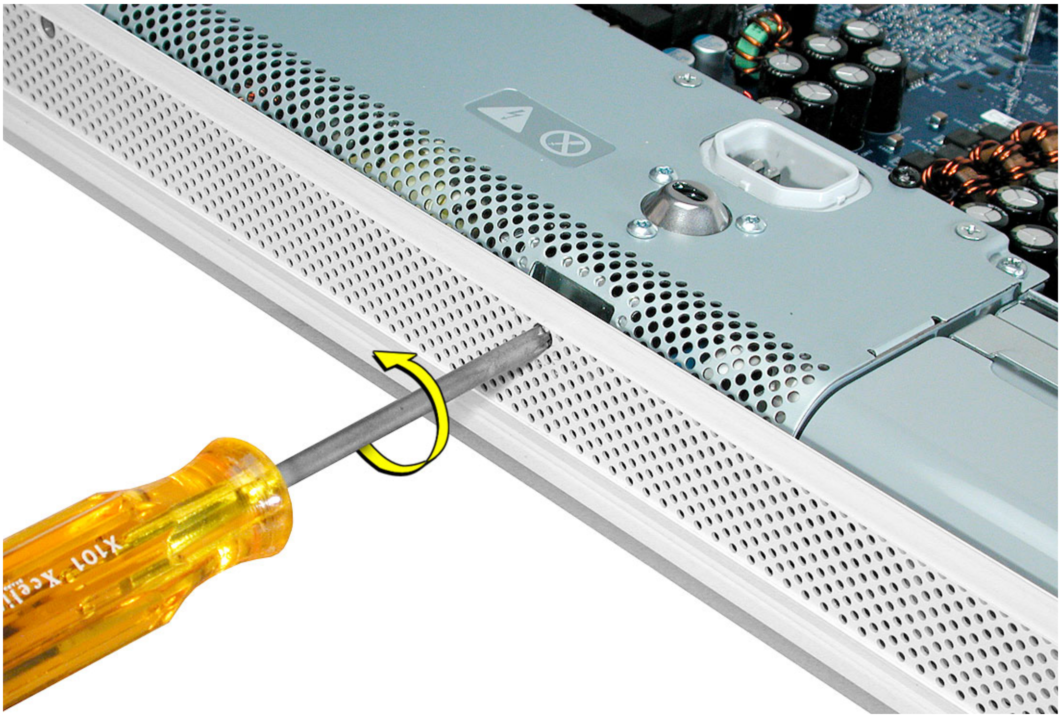
9. Reconnect the inverter-to-display panel cable. **Important:** The connector is keyed (it fits together only one way).



10. Secure the connector under the metal tab.

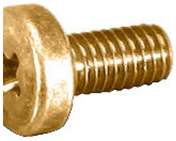


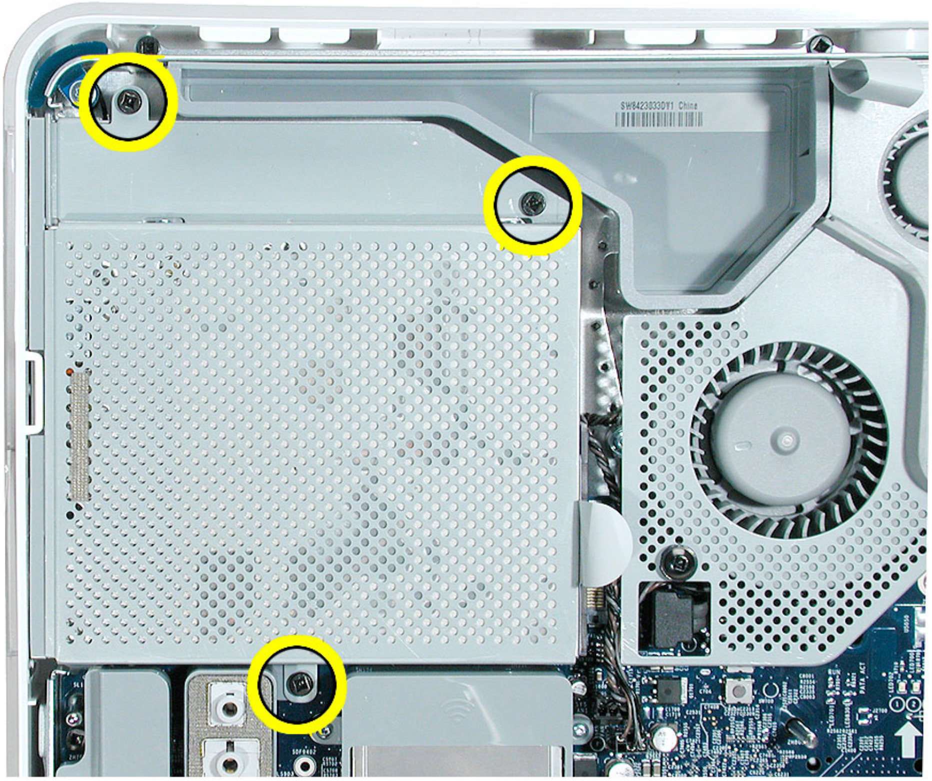
11. Turn the middle case screw counterclockwise about five revolutions. This step prepares the back cover to be installed and secured.



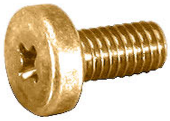
Screw Charts

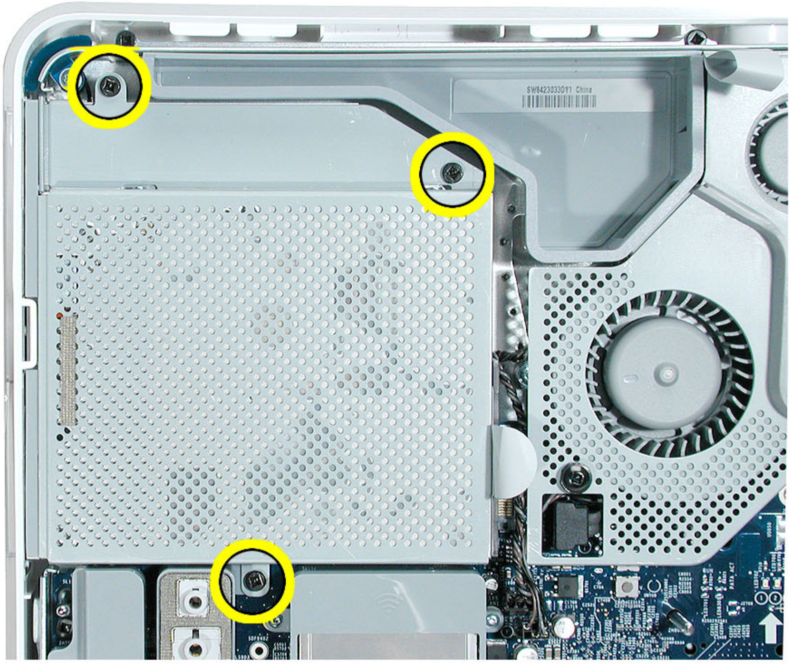
To Access the Optical Drive

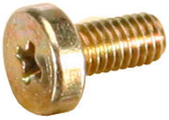


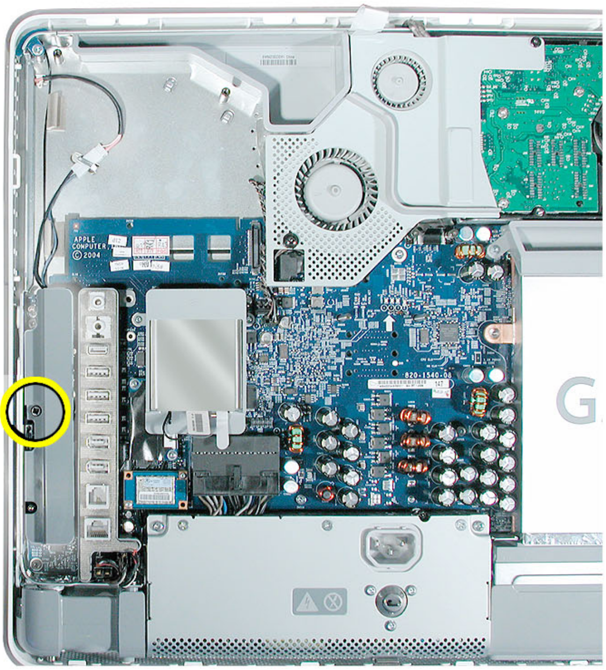


To Access the Inverter

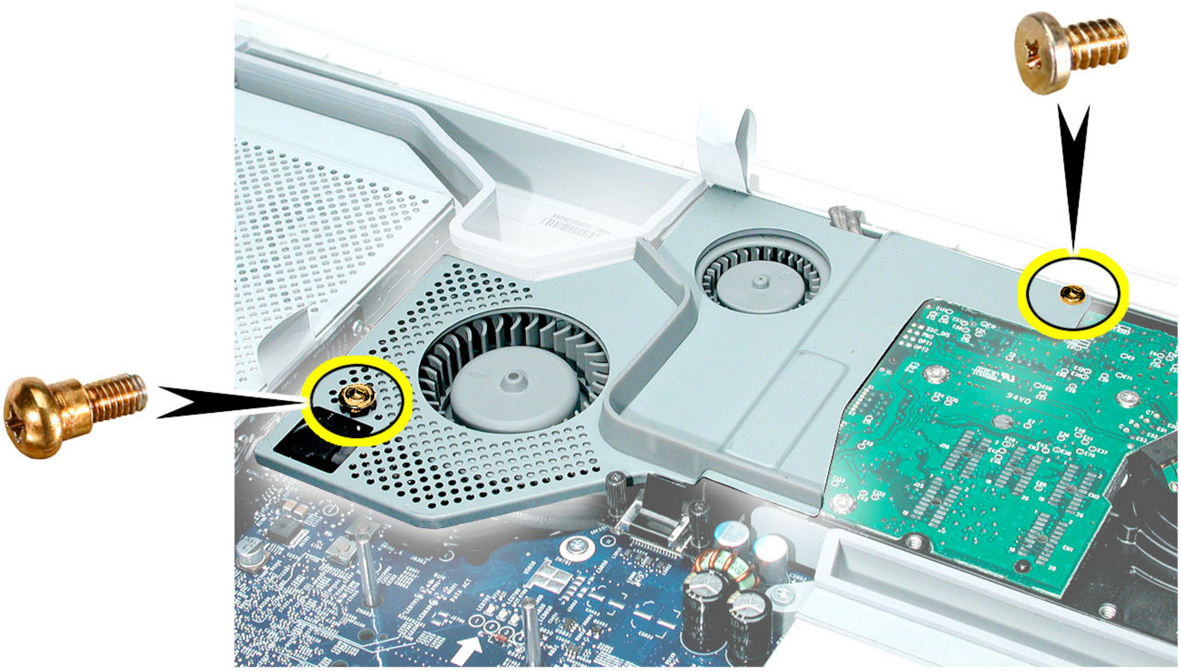




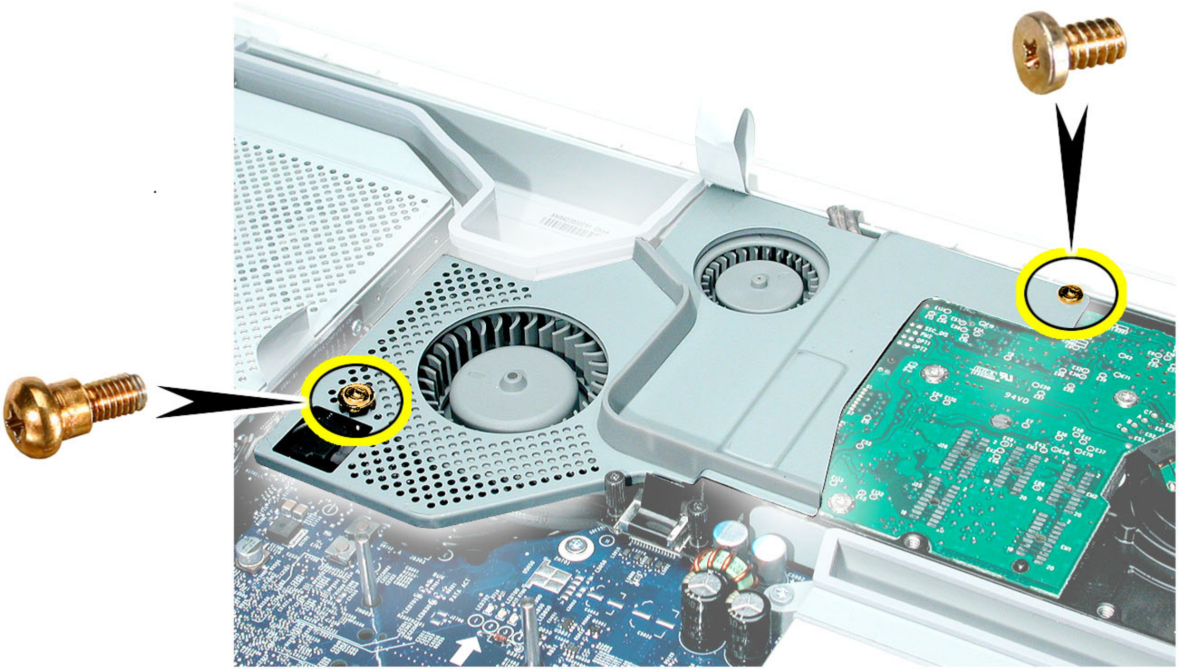


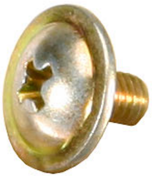


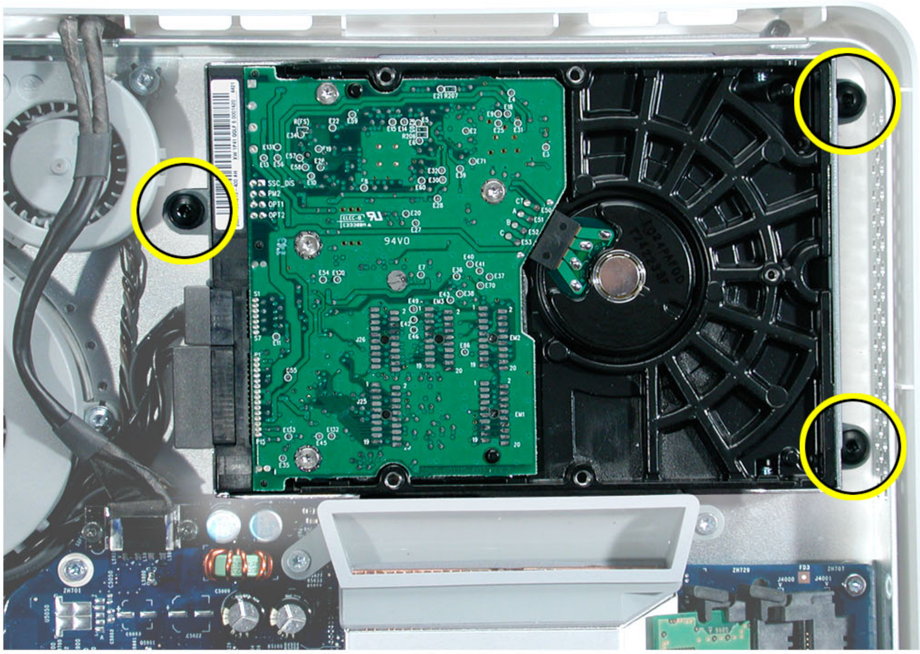
To Access the Fan Cover



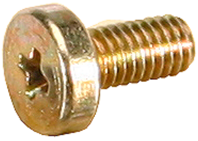
To Access the Hard Drive

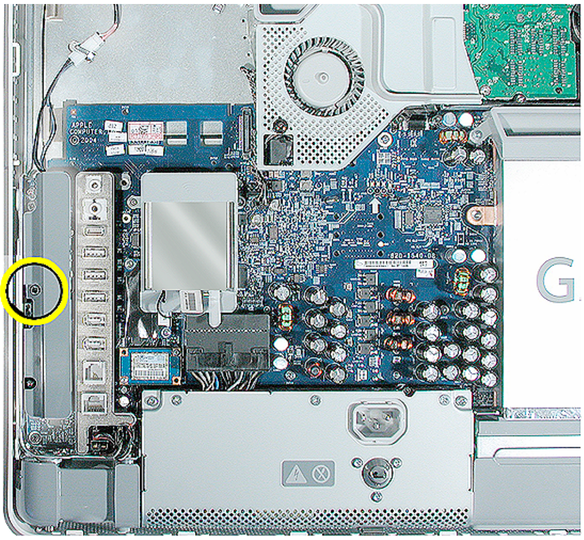


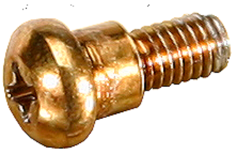


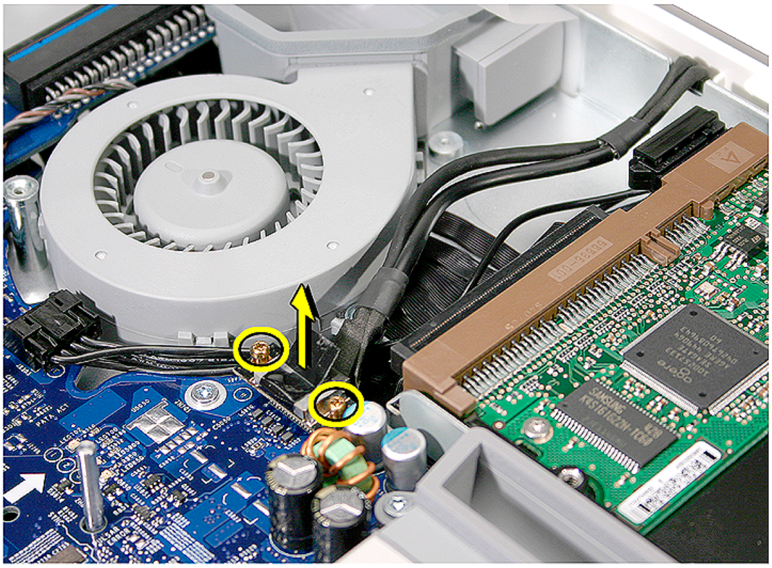


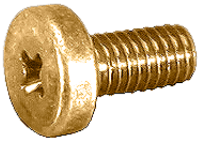
To Access the Display/Bezel-Part 1

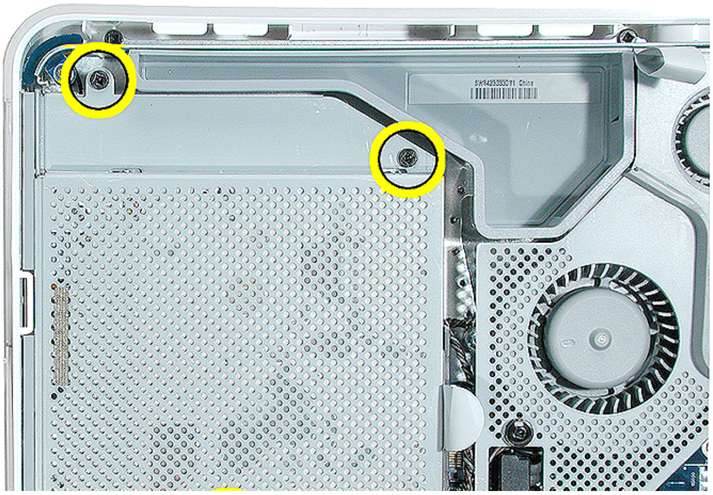




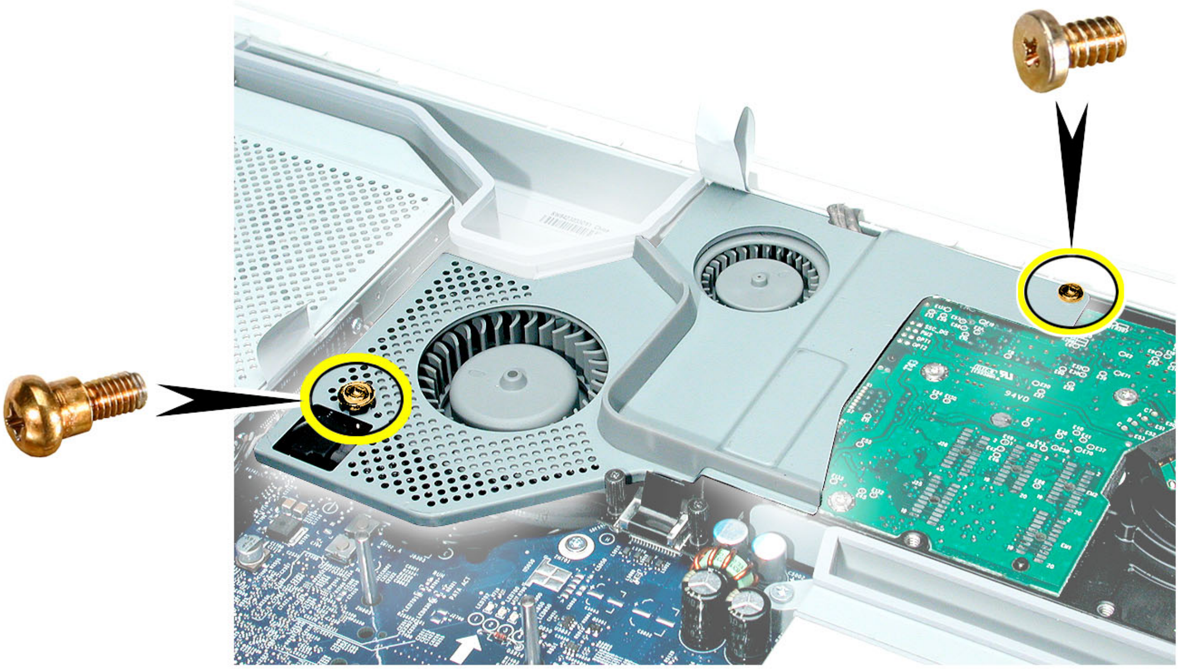


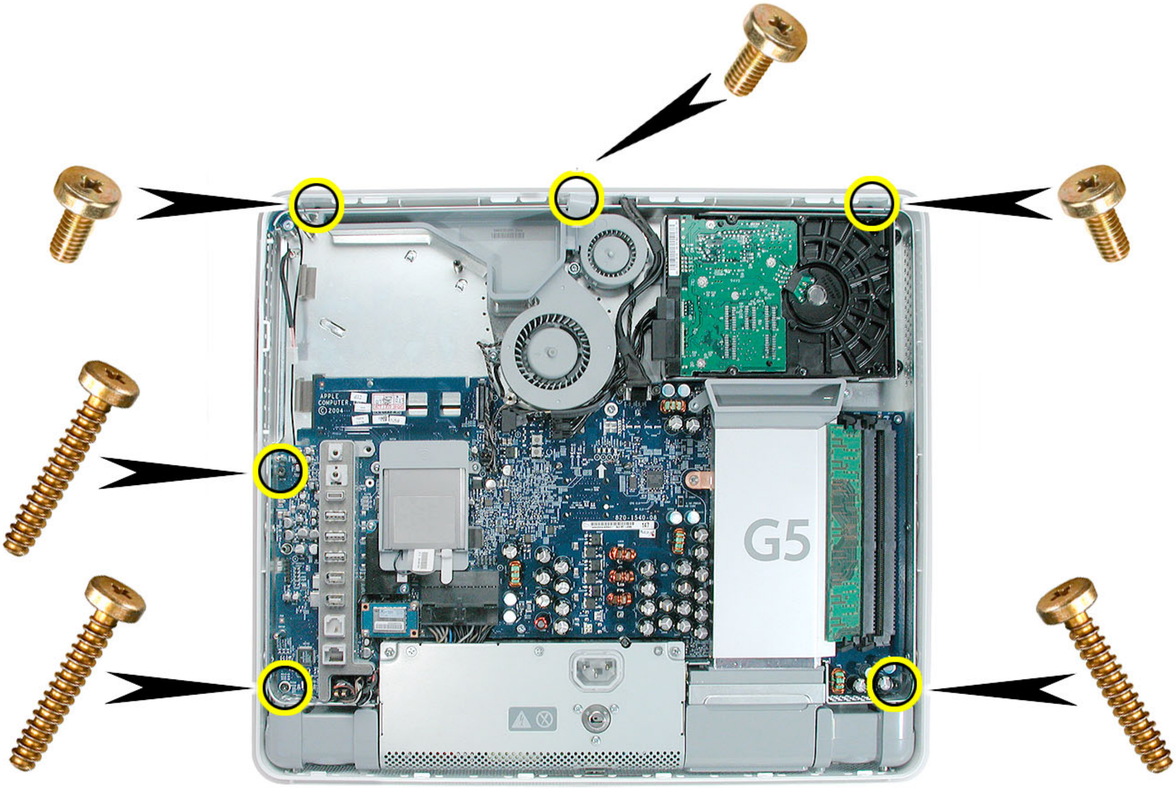




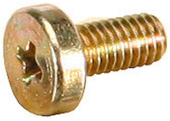


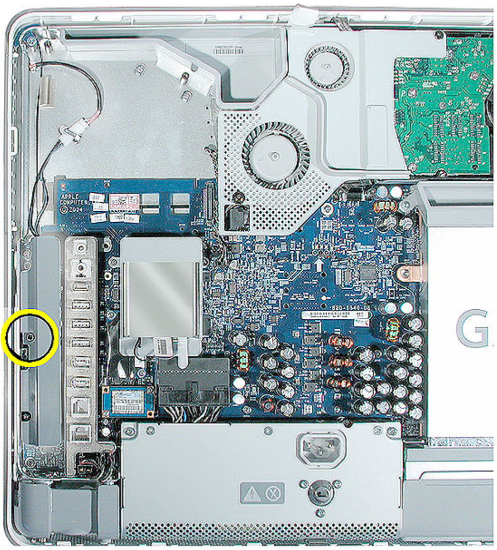
To Access the Display/Bezel-Part 2

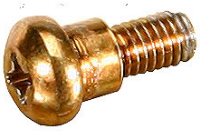


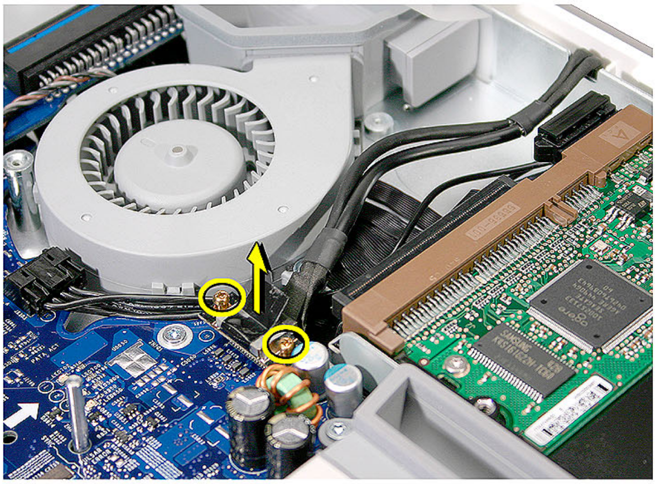


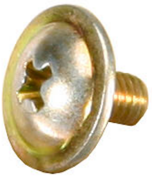
To Access the Midplane Assembly-Part 1

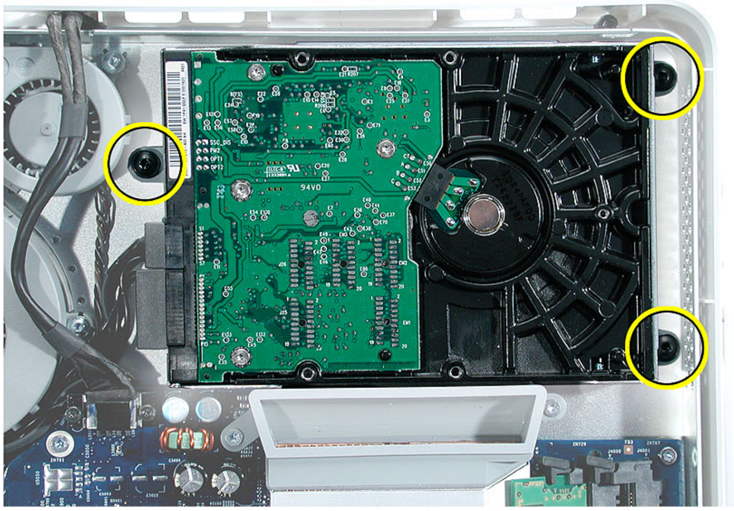




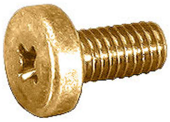


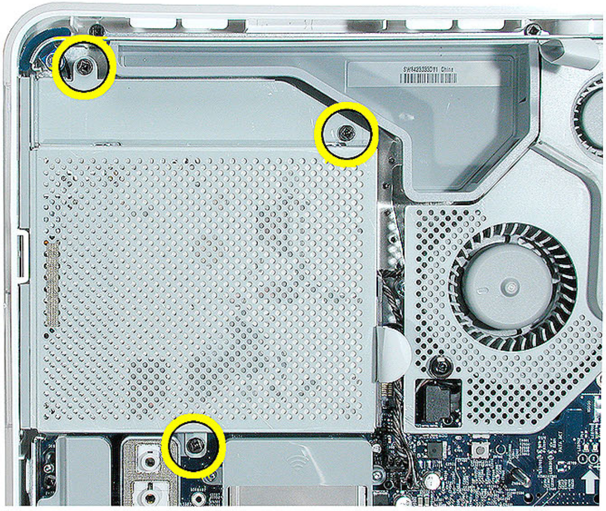


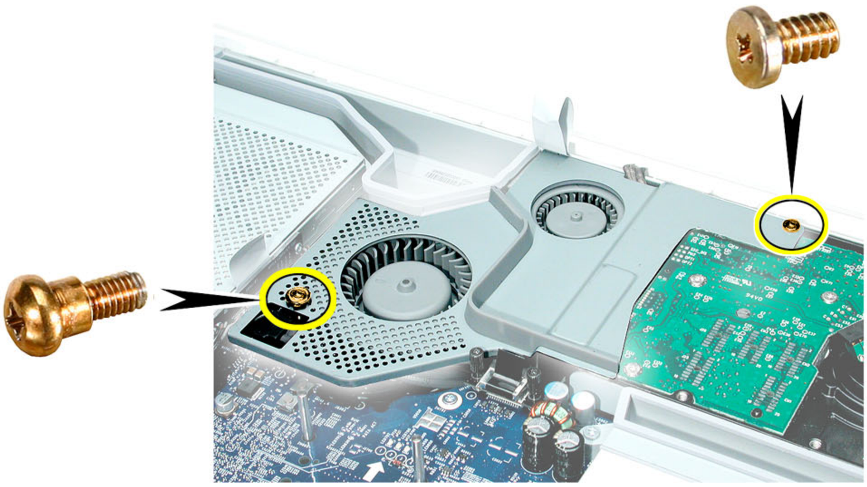


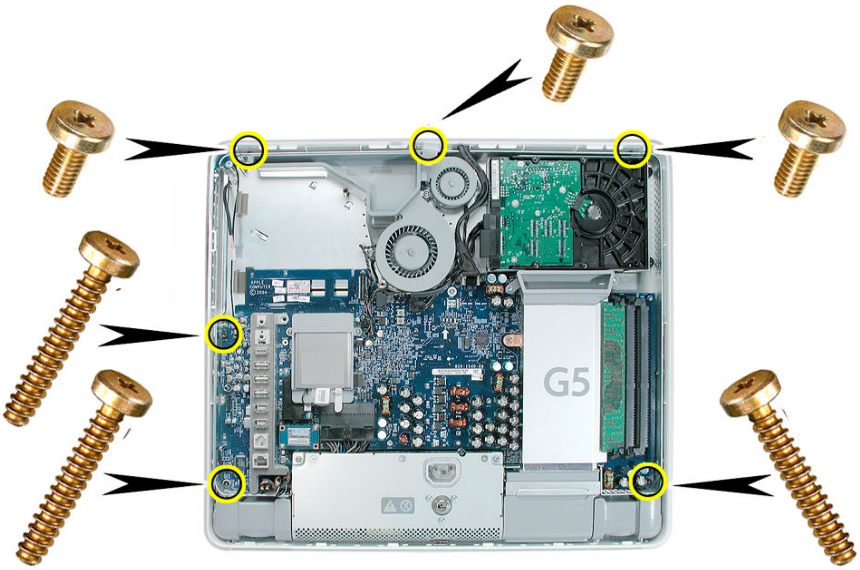


To Access the Midplane Assembly-Part 2

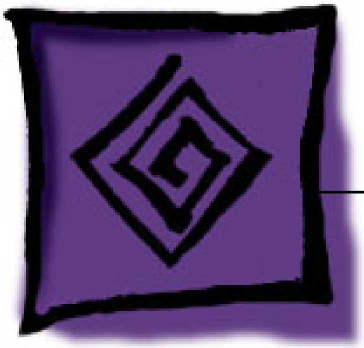








Service Source



Troubleshooting

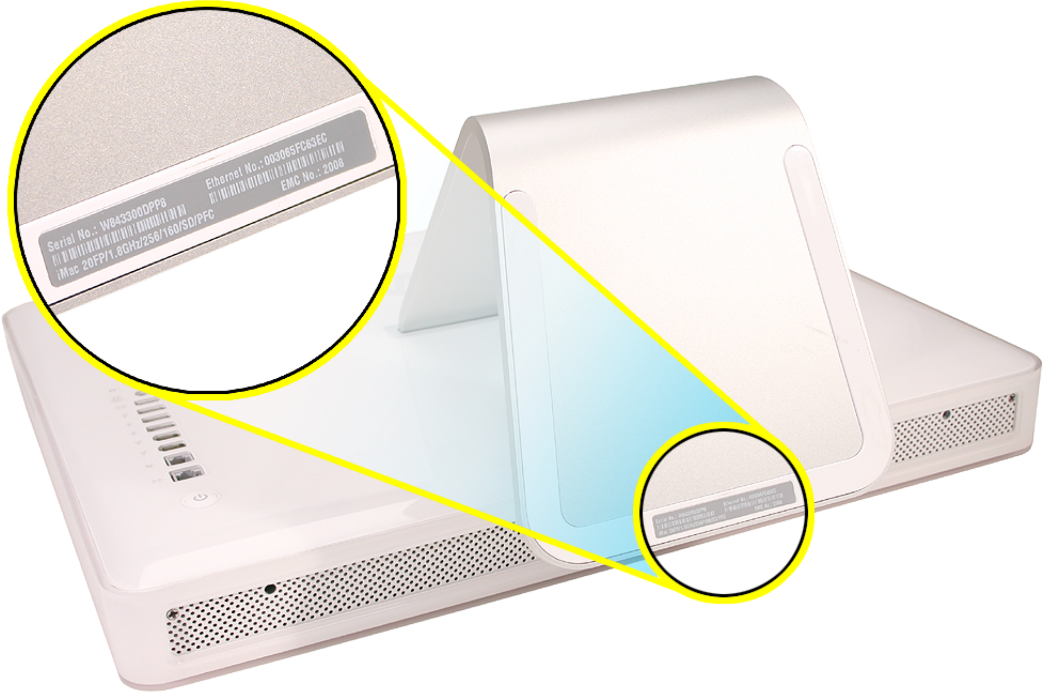
iMac G5 (17-inch)

© 2004 Apple Computer, Inc. All rights reserved.

General Information

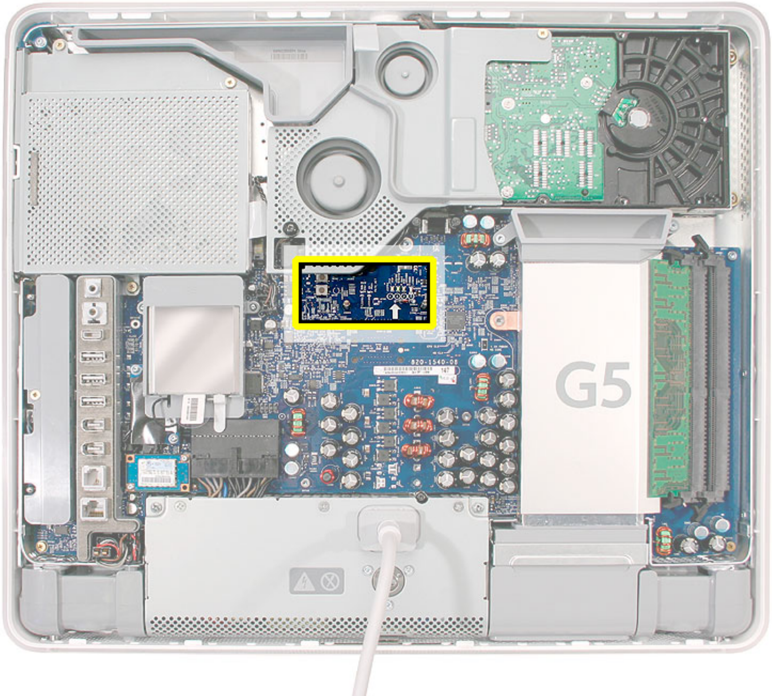
Serial Number Location

The iMac G5 serial number is located on the bottom of the computer stand (foot). **Note:** If the back cover is replaced, copy the serial number from the original back cover to the blank label that comes with the replacement back cover. Attach the new label to the replacement back cover.


Serial No.: W843300DPP8
iMac 20FP/1.8GHz/256/160/SD/PFC
Ethernet No.: 003065FC63EC
EMC No.: 2008

Diagnostic LEDs

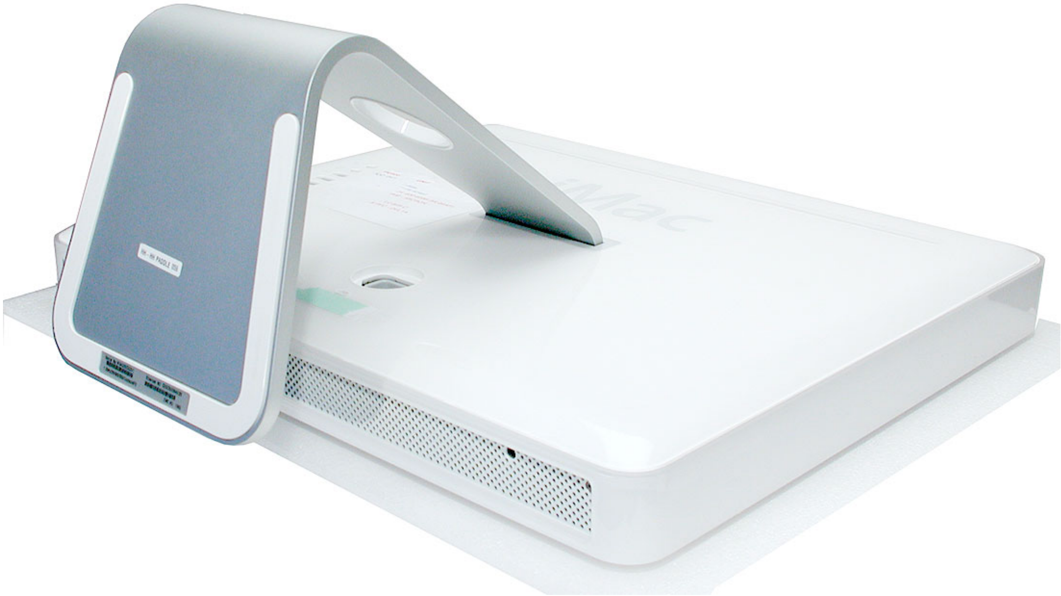
The iMac G5 has built-in diagnostic LEDs (shown below) on the main logic board that can help you to troubleshoot the computer.



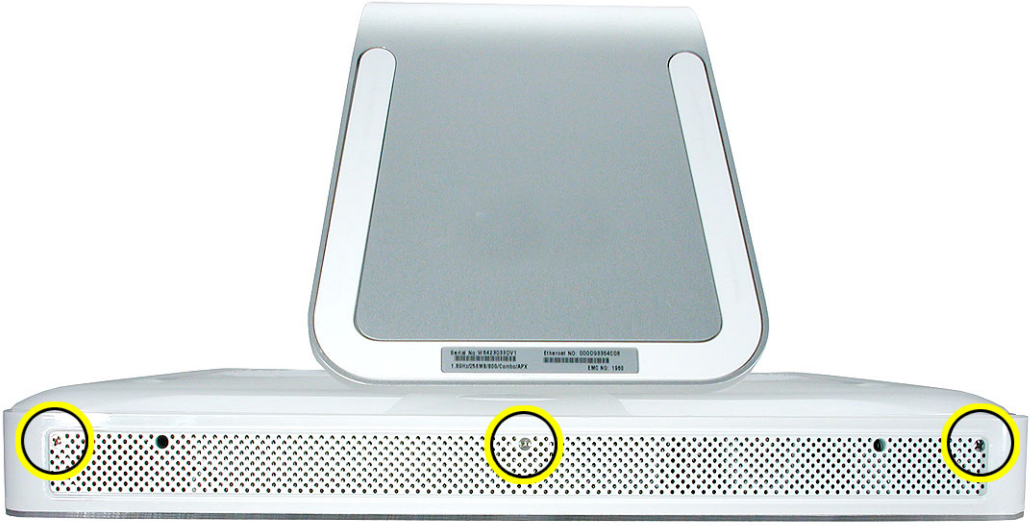
To access these LEDs, remove the back cover of the computer:

1. Turn your computer off (choose Shut Down from the Apple menu). If you can't shut it down that way, you can turn the computer off by pressing the power button for five seconds.
2. After the computer is off, disconnect all cables and the power cord from your computer.

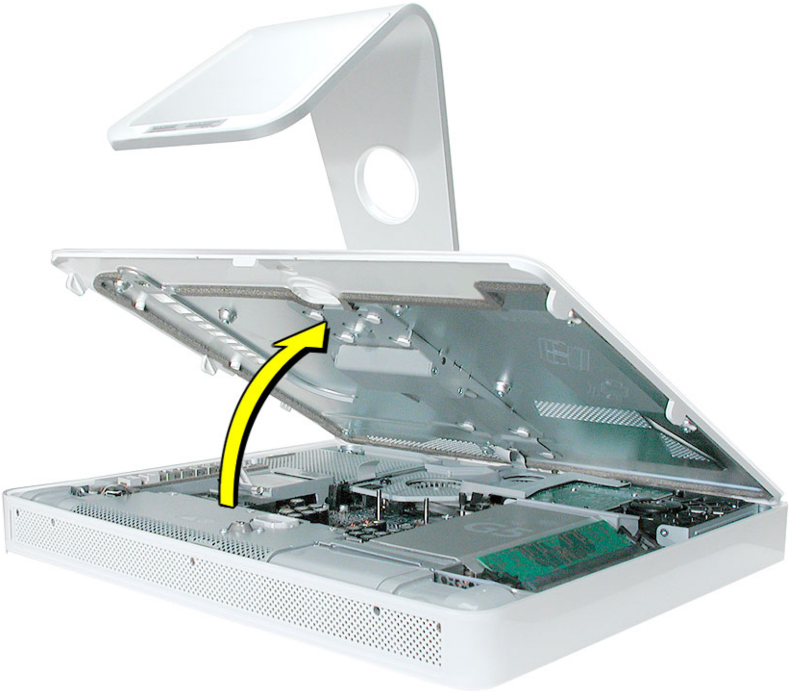
3. Place a soft, clean towel or cloth on the desk or surface. Hold the sides of the computer and slowly lay it down so the screen is flat against the surface and the bottom is toward you.



4. Raise the foot and use a Phillips #1 screwdriver to loosen the three screws at the bottom of the computer by turning them completely counterclockwise. These are “captive screws,” which means they're not supposed to come all the way out.

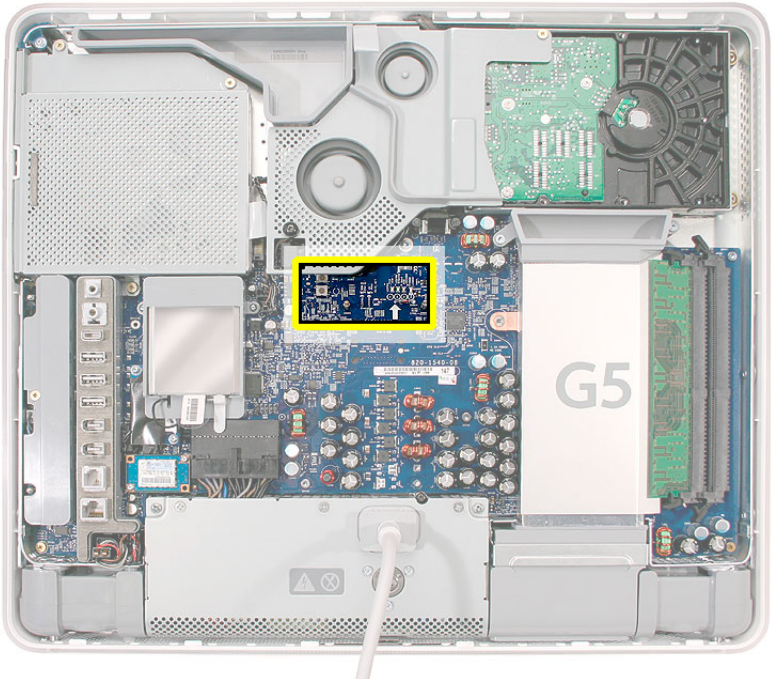


5. As you hold the metal foot, tilt the back cover up and lift it away from the computer. The back cover with the foot attached should come off easily. If it doesn't, make sure the screws are turned completely counter-clockwise, but not too far.

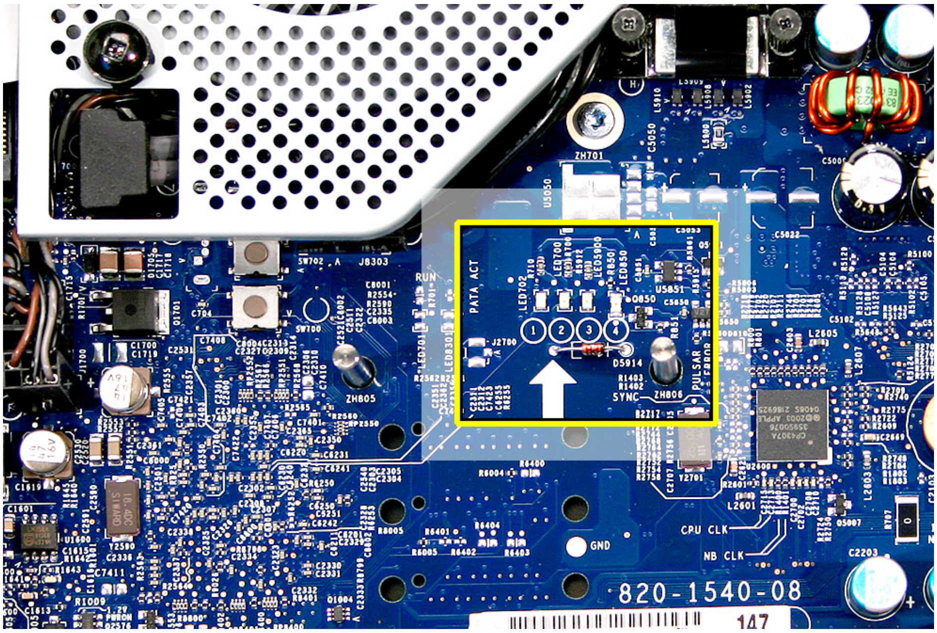


6. To protect the computer from electrostatic discharge, ground yourself by touching a metal surface inside the computer. **Warning:** Always discharge static electricity before you touch any parts or install any components inside the computer. Don't walk around the room in socks or bare feet, for example, until after you've finished these steps.

7. Locate the large white arrow in the middle of the board.



8. Above this arrow, you'll see four LEDs:

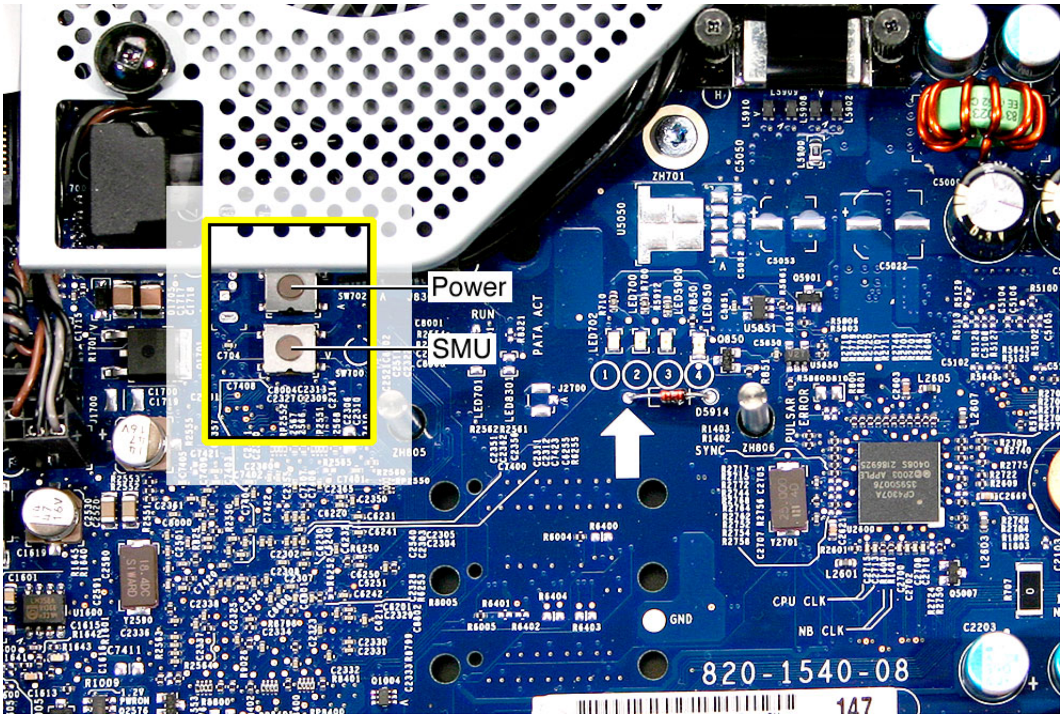

PATA ACT
RUN
PULSAR FRONT
SYNC
GND
CPU CLK
NB CLK
820-1540-08

- **LED 1** indicates that trickle voltage from the power supply has been detected. This LED will be ON when the computer is turned off and your power supply is working correctly.
- **LED 2** indicates that the main logic board has detected proper power from the power supply when the computer is turned on. This LED will be ON when the computer is turned on and the power supply is working correctly.

- **LED 3** indicates that the computer and the LCD display are communicating. This LED will be ON when the computer is turned on and video signal is being generated.
- **LED 4** lights only if the computer detects an over-temperature condition. This LED will be OFF when the computer is turned on and running at the correct temperature.

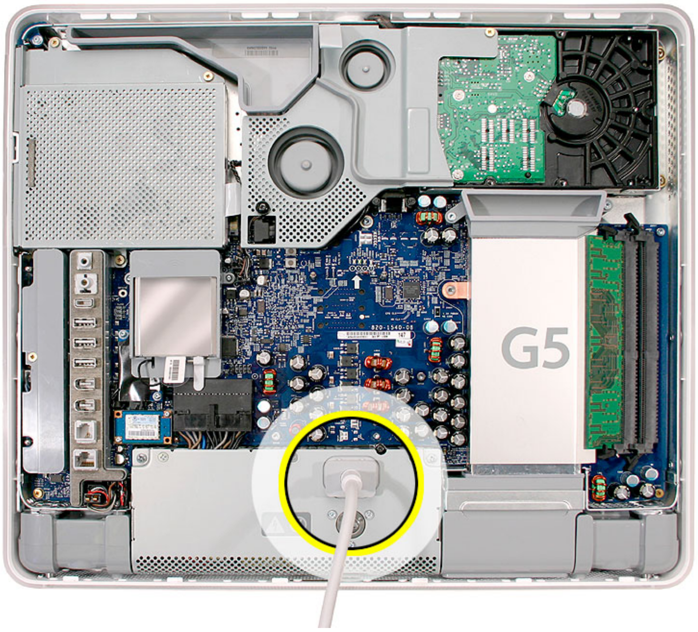
Internal Power Button

To the left of the diagnostic LEDs are two buttons. The top button is the internal power button; the lower button is the SMU button (described later in this chapter). The internal power button gives you the ability to power on the computer with the back cover off the computer.

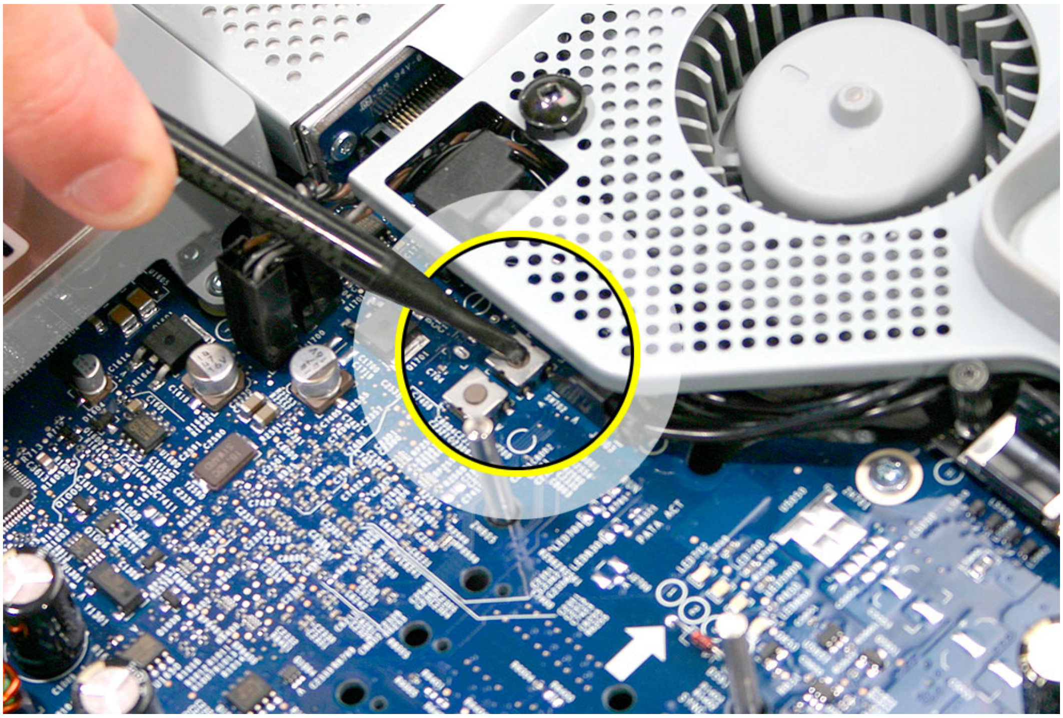


To power the computer on with the back cover off:

1. First remove the back cover.
2. Plug in the power cord.



3. Press the power button. The LEDs will come on indicating the computer status.

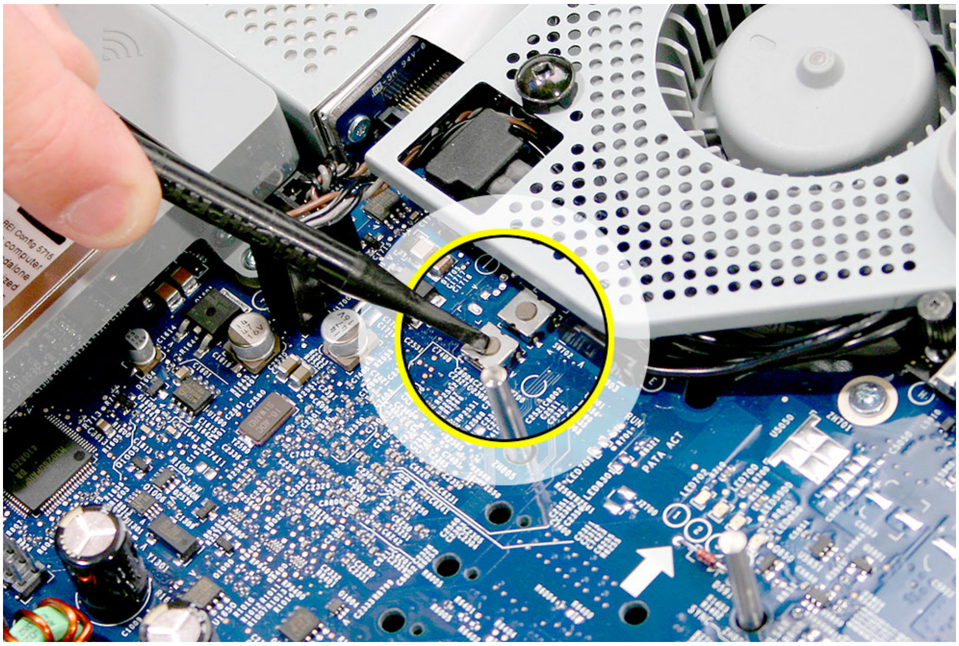


4. To shut the computer off with the back cover off, press the power button for at least five seconds. The green LEDs will go out.

SMU Button on the Midplane Board

The iMac G5 uses an advanced system management unit (SMU) to manage the thermal and wattage conditions, while keeping the acoustic noise to a minimum. The SMU controls the fans and regulates the speeds to run each fan.

The SMU reset button (shown below) is similar to the PMU button on previous iMac computers.



The SMU supports the following functions:

- provides initial configuration of system clocks
- automatically initiates and sequences voltage and frequency slews when the OS requests a transition to a new run level
- handles all power button and environmental user events
- controls RPM fans
- provides processor Mode Ring and thermal data store
- monitors processor temperature and power consumption
- monitors VRD10-compliant processor power supply digital interface.

The iMac G5 system employs advanced thermal and wattage management to keep acoustic noise to a minimum. The enclosure is divided into discrete zones, each with independently controlled fans bringing in cool air from the front of the enclosure, directing it over system components and exhausting it out the rear. Temperature and power consumption are monitored by the operating system which communicates with the SMU, which in turn controls and monitors fan operation. If Mac OS X is not booted, thermal management must be provided by the alternate development operating system.

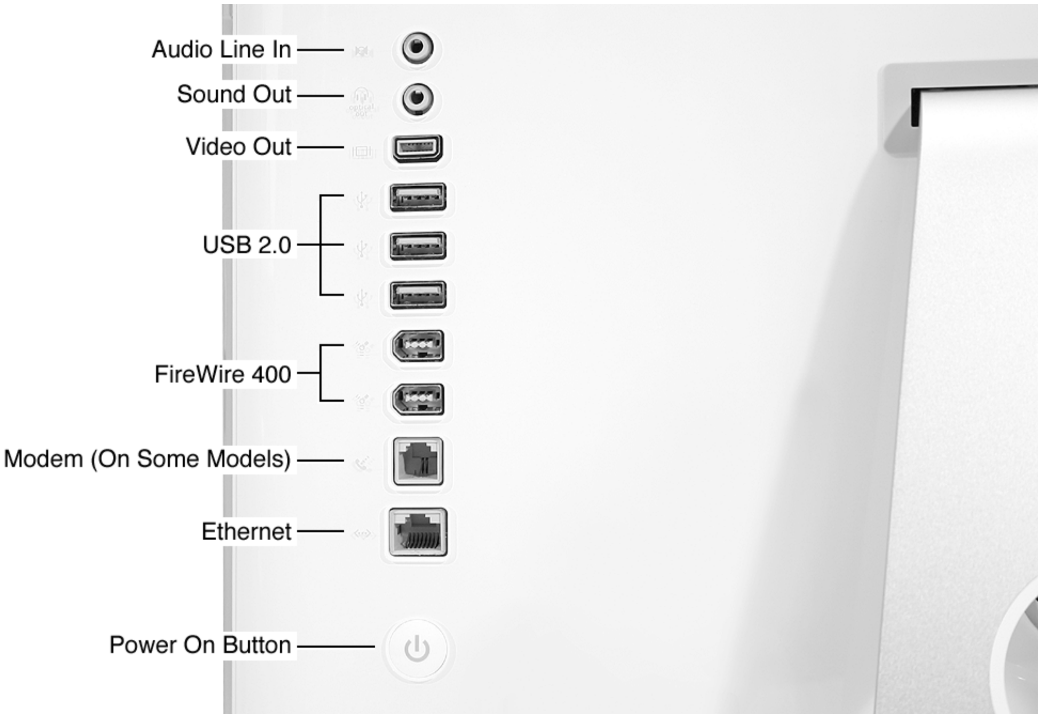
Note: If Mac OS X is not booted and the alternate development operating system does not manage the fans, the fans go into an unmanaged state and run at full speed.

The SMU controls the fans and regulates the speeds to run each fan. The SMU derives fan speed from sensors in each thermal zone. Some of these sensors monitor thermal only, while others monitor both thermal and power.

If the SMU does not receive an update from the operating system within two minutes, it begins to ramp up the speed of the fans to full speed.

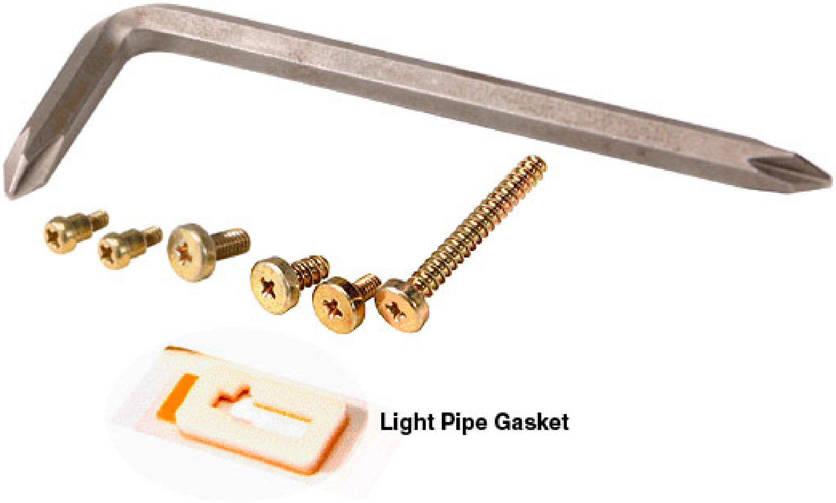
Ports

The iMac G5 ports are shown below.

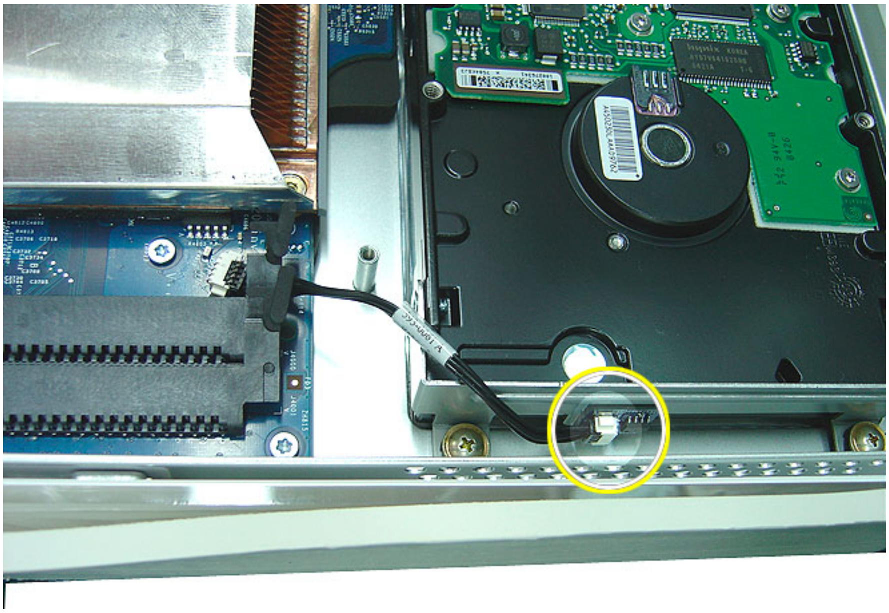

Audio Line In
Sound Out
Video Out
USB 2.0
FireWire 400
Modem (On Some Models)
Ethernet
Power On Button

Spares Kit Shipping with Replacement Modules

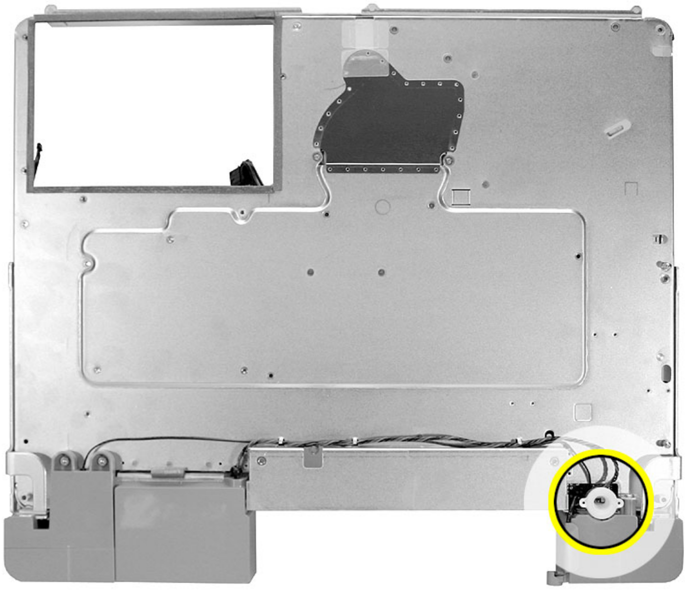
1. A spares kit (sample of display/bezel kit shown below) is included with each replacement part. All spares kits include the Phillips #1 tool and extra screws for the replacement module. All customer removable screws are brass colored. **Important: Do not remove screws unless they are brass colored, or you will void the warranty.**



2. In addition to the tool and extra screws, an extra thermal sensor cable (shown below) is included with the hard drive replacement part. If the original sensor is damaged during the disassembly, attach the new sensor cable to the main board and to the end of the hard drive (as shown).



3. The light pipe gasket (called out in step 1) secures the light pipe to the underside of the midplane. If the light pipe falls off the midplane, secure the light pipe with the gasket enclosed in the spares kit.



Service modules

- Midplane Assembly (available with or without Bluetooth)
- Display and Bezel assembly
- Hard drive, with carrier
- Power supply
- Optical drive
- Backup battery
- AirPort Extreme card
- Memory DIMMs, DDR 400
- Inverter
- Back Cover and Stand (Foot)
- Fan Cover (only on 17-inch with Serial ATA drive)

Midplane Replacement

The following items are not separate, orderable parts. To replace them, you must replace the midplane assembly.

- Fan(s)
- Main logic board
- Midplane chassis
- Logic board cables
- Speakers
- I/O panel

Display/Bezel Replacement

The following items are not separate, orderable parts. To replace them, you must replace the display/bezel assembly.

- Flat panel display
- TMDS video cable
- Inverter-to-display cable
- Display bezel housing (white case)

DDR Memory

iMac G5 computers work with memory modules (DIMMs) that meet all of these criteria: PC3200, 2.5V, unbuffered, 8-byte, nonparity, 184-pin, 400Mhz DDR SDRAM.

There are two RAM slots. The maximum amount of RAM you can install is 2 GB. You can use RAM module sizes of 256 MB, 512 MB and 1 GB, in either slot.

DIMMs with any of the following features are not supported in the iMac G5 computer: registers or buffers, PLLs, ECC, parity, or EDO RAM.

Symptom Charts

How to Use the Symptom Charts

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to the product. Because cures are listed on the charts in the order of most likely solution, try the cures in the order presented. Verify whether or not the product continues to exhibit the symptom. If the symptom persists, try the next cure.

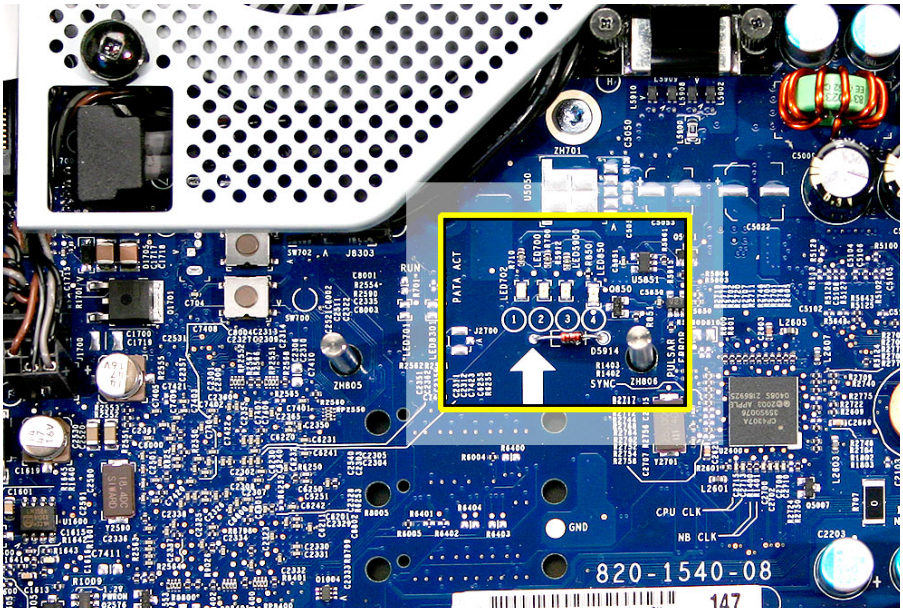
Note: If a cure instructs you to replace a module, reinstall the original module before you proceed to the next cure.

Power Issues

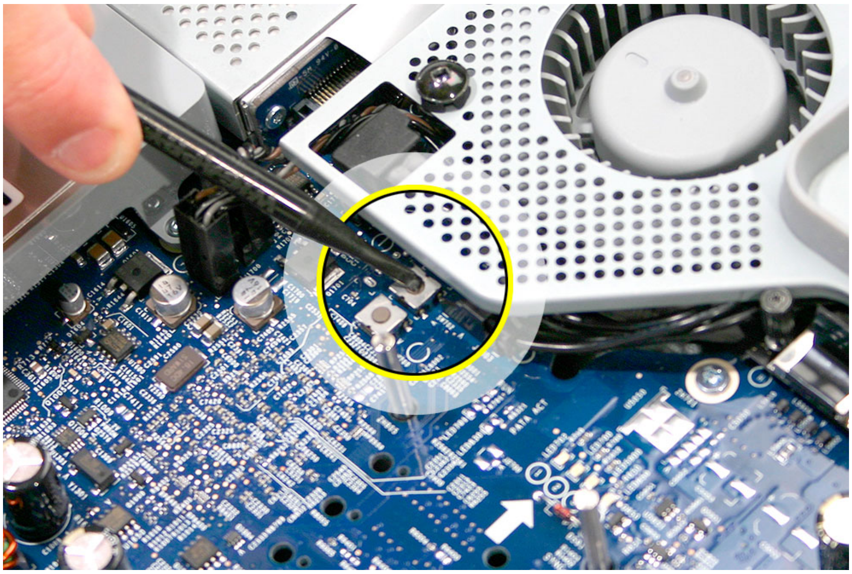
No Power.

The iMac G5 will not turn on. The display has no picture or color and no sounds can be heard coming from the fan or hard drive.

1. Verify power outlet is good. Plug a different device into the socket to ensure there is power, or plug the iMac G5 into another outlet.
2. Check the power cord. Use a known good power cord.
3. Check the connection of the power cord on both ends. Verify that the plug is securely plugged into both the AC outlet and back of the computer.
4. Remove keyboard, mouse, and other peripherals such as speakers. Try starting up the computer with these devices removed.
5. Remove the back cover to access the diagnostic LEDs on the main logic board. See “Diagnostic LEDs” in this chapter for complete instructions on this procedure.
6. Locate LEDs 1 through 4 above the large white arrow in the middle of the main logic board (near the fan cover).



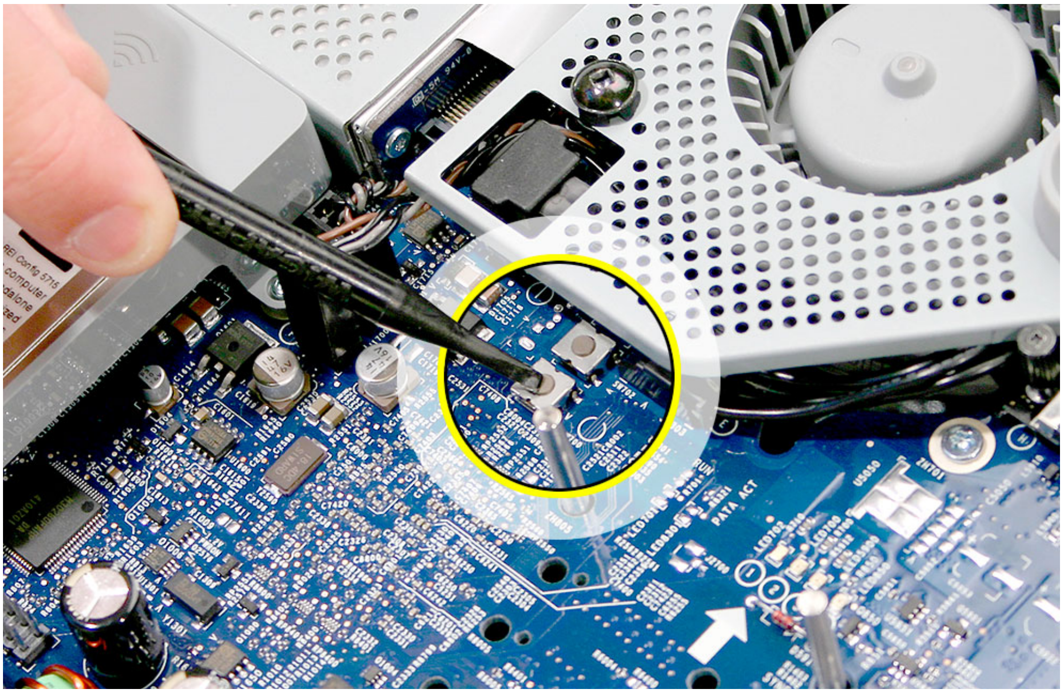
7. Plug the power cord into the iMac G5 and into the AC outlet. Check to see if LED #1 is On or Off.
    - **LED #1 is On**. This indicates that the power supply is getting good power from the AC outlet. Go to step 8.
    - **LED #1 is Off**. This indicates that your power supply should be replaced. Order and install the power supply for your computer.
8. Turn the computer on by using the internal power button. With your finger, or with the nylon probe tool, press the small, metal button. Go on to the next step.



9. Does the computer start up normally after pressing the internal power button?

   - **Yes**: Press and hold the power button until the computer powers off.
   - Unplug the power cord from the iMac, and reinstall the back cover.
   - Return the computer to the upright position.
   - Plug the computer back in, and press the power button to turn on the computer.
   - Make sure the computer is starting up properly. If the computer will ONLY start up from the internal power but will not power on from the power button on the back cover, the power button on the back cover may be faulty. Go to step 11

   - **No**: Press the SMU reset button to reset system power management. The SMU is the small metal button (shown below) located below the internal power button.



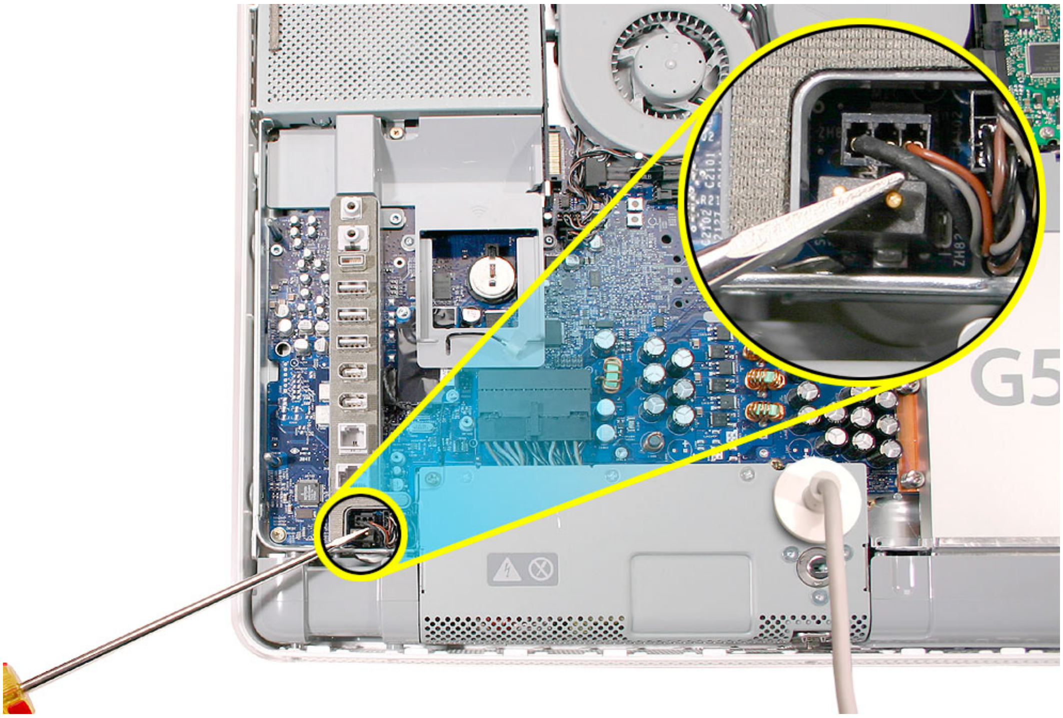
10. After pressing the SMU button, press the internal power button again. Does the computer start up normally now?

    - **Yes**: Press and hold the power button until the machine powers off.
    - Unplug the power cord from the iMac, and replace the back cover.
    - Return the computer to the upright position.
    - Plug the in the computer, and press the power button to turn on the computer.
    - Make sure the computer is starting up properly. If the computer will ONLY start up from the internal power but will not power on from the power button on the back cover, this may indicate that the power button on the back cover is faulty. Got to step 11.

    - No: If LED #1 is On, but the computer will not start up by pressing the internal power button or after the SMU has been reset, this indicates that your midplane assembly should be replaced. Order and install the midplane assembly for your computer.

11. Unplug the computer and again remove the back cover.

    Plug in the computer. With a screwdriver, touch and hold the screwdriver to the two contact points for the power button switch (shown below). **Note:** The picture below shows the contact points on the iMac G5 (20-inch) computer. The contact points are in the same location on the iMac G5 (17-inch) computer.



Does your computer start up when holding your screwdriver to these two contact points?

- **Yes:** This indicates that the power button switch is working correctly. You should order and replace the back cover for your computer.

- No: This indicates that the power switch is not working correctly. You should order and replace the midplane for your computer.

Loud buzzing, ticking, or whining noise

The computer may make a loud buzzing, ticking, or whining noise when it's on. The sound may vary depending upon screen brightness or processor load.

1. Determine that this noise is related to the computer by removing and shutting down all other devices in the vicinity of the computer that could be causing a sound.
2. Determine if this is a power supply noise. With the iMac G5 on and running, adjust the screen brightness by pressing the F14 and F15 keys on the keyboard. Does the noise change in loudness when adjusting the brightness?

   Yes: The volume changes when the brightness changes, the noise may be related to the power supply. Replace the power supply.

   No: If the volume does not change when the brightness changes, the noise is not a power supply issue. Go on to step 3.
3. Quit all applications and test the computer again.
4. Check the volume settings under Sound in System Preferences.
5. Reboot the computer and check the computer again.
6. If the noise still doesn't go away, contact Apple Technical Support.

No Video

The computer will turn on, but the display has no picture or color. The boot chime, the fan, and hard drive activity can be heard.

1. Check if the computer is sleeping. Press the space bar to wake the computer from sleep mode.
2. Did the computer wake from sleep?

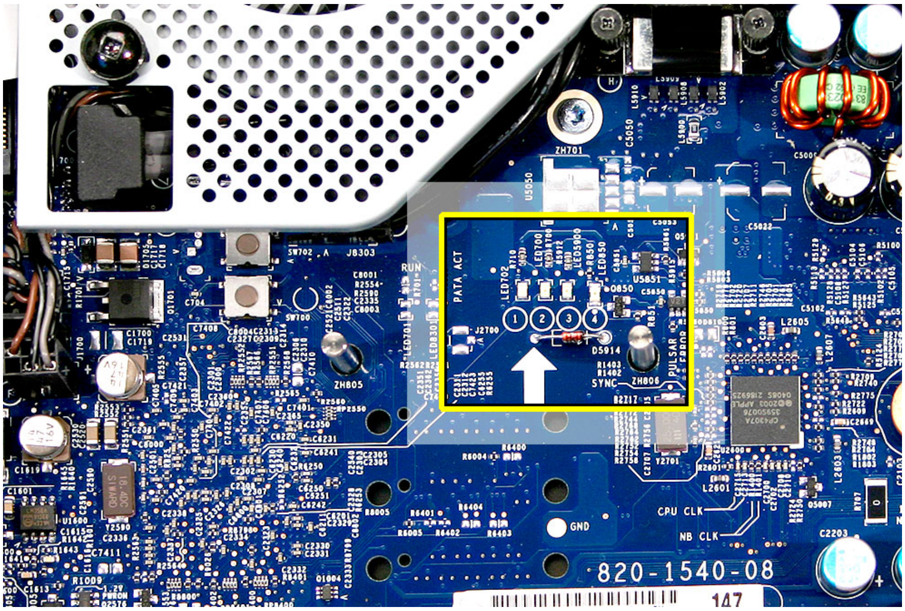
   Yes: Put the computer to sleep from the Apple menu and wake the computer again to test the settings. Check Energy Saver setting to see when the computer has been designated to sleep.

   No: Continue to the next step.
3. Reset your computer's PRAM (Parameter RAM).
   - If your iMac is on, turn it off by pressing the power button in until the computer powers off. You should hear the drives and fans go quiet.
   - Wait for a few seconds.
   - While the computer is off, with your left hand, hold down the Apple key, the option key next to it, and the letter R. When you have them all pressed push the power button with your right hand and then quickly move that hand to hold down the letter P. Keep the four keys pressed while the computer starts up.
   - Make sure you hold down the four keys (P-R-Command-Option) while the computer starts up. When you keep all the keys held down, you will hear the startup chime over and over again (about every ten seconds) until you let go. After you hear the second chime, you can let go of the keys.
   - If you didn't hear at least two startup chimes, go to step one on this page and try again. It's important that you two startup chimes when performing this procedure. This indicates that you have successfully reset the computer's PRAM (Parameter RAM).
4. Does the computer display video after successfully resetting the computer's PRAM?

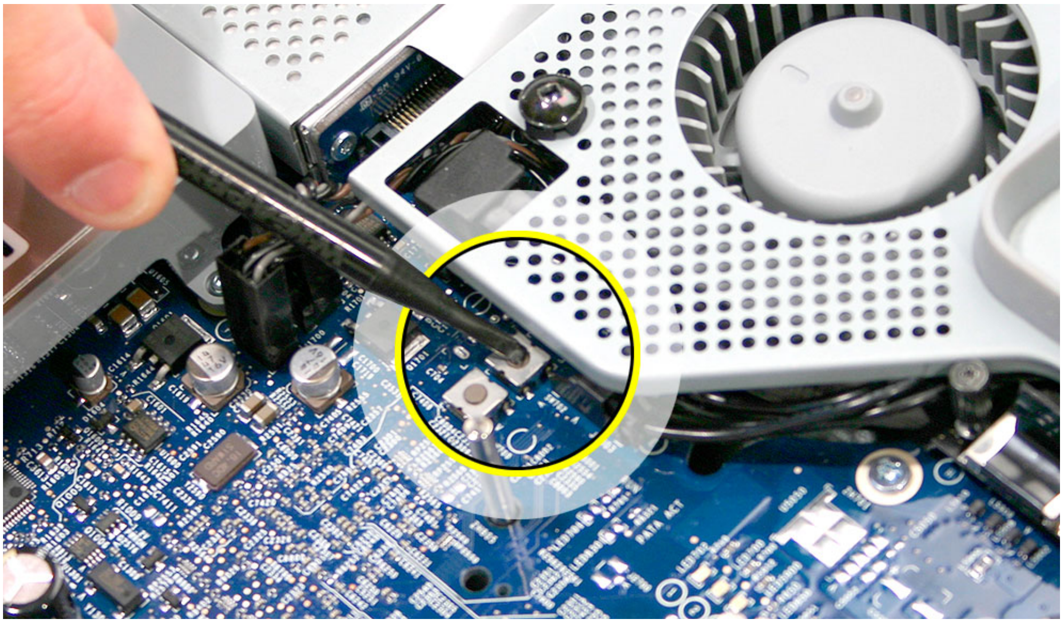
   Yes: Problem resolved. Restart the computer from the Apple menu and make sure the computer is starting up properly.

   No: Continue to the next step.

5. Remove the Back Cover to access the diagnostic LEDs on the main logic board.
6. With the back cover removed, locate the diagnostic LEDs 1 through 4 above the large white arrow on the main logic board.



7. Plug the power cord into the iMac G5 and into a known good AC outlet. LED #1 should come on if your computer has been starting up properly. If LED #1 is Off, see iMac G5: Troubleshooting: No Power for further troubleshooting information.
8. Turn the computer on by using the internal power button. Press the small, metal button under the fan cover as shown



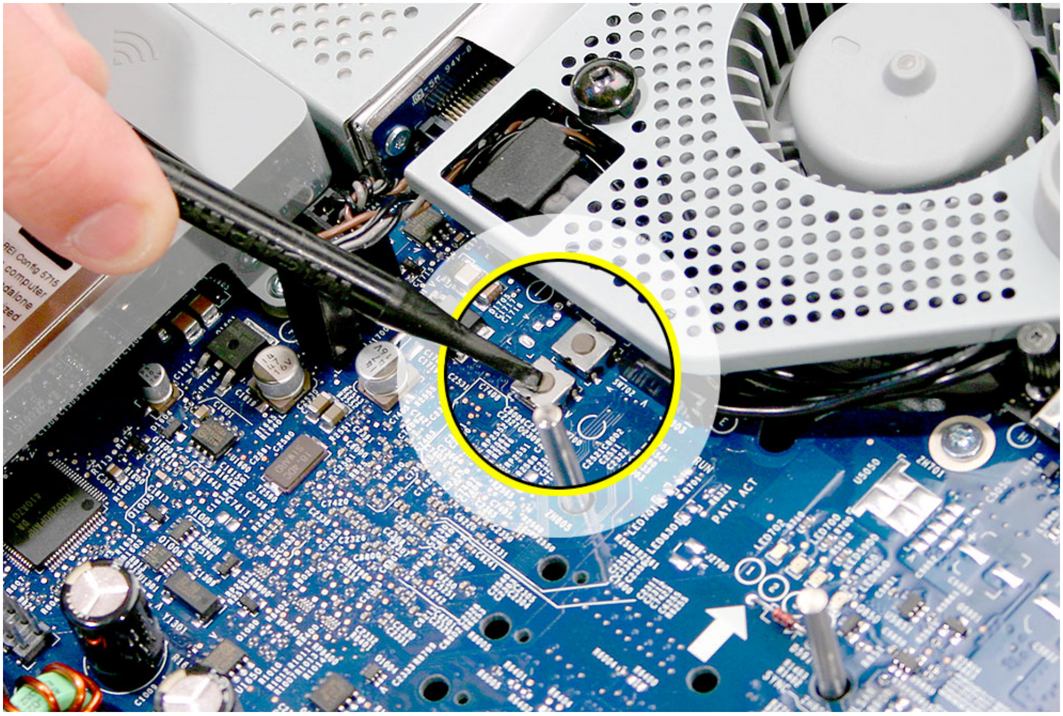
9. When the computer starts up, LED #2 will light after you hear the boot chime indicating the midplane is processing power correctly. If LED #2 does not light, go to step 11 for instructions on resetting the SMU. If LED #2 remains off after resetting the SMU, your midplane needs to be replaced. Order and install the midplane for your computer.

10. LED # 3 will light last indicating that the midplane and LCD assembly have communicated and the LCD is ready to receive video. Does LED #3 come On?

    Yes: This indicates that your miplane is working correctly to produce video. Continue to step 12**.**

    No: Continue to step 11 to reset system power management.

11. Press and hold the internal power button to power off the unit. Next, press the SMU reset button to reset system and power management. This is the small metal button below the internal power button as shown.



    After pressing the SMU button, press the internal power button to start up the computer. Does LED #3 light now?

    Yes: Press and hold the power button until the computer powers off. Start the computer again and confirm that LED #3 is reliably lighting. Continue to step 12.

    No: If LED #3 is Off, this indicates that your midplane needs to replaced.

12. With LED #3 on, turn the computer off again by holding in the internal power button until the computer powers off. Unplug the computer and reinstall the back cover. Return the computer to the upright position. Plug in the computer and power on the computer. Does the computer have video now?

    Yes: Restart the computer and make sure that the computer is now operating properly.

    No: Look closely at the display and see if it is completely black or if the video is very, very dim. Continue to next step.

13. Is the display completely black or just very, very dim?
    - **Completely black**. Your LCD needs to be replaced. Order and install the LCD display panel for your computer.
    - **Very dim video.** Your inverter board needs to be replaced. Order and install the inverter board for your computer.

Display is tinted another color

1. Reset the parameter RAM. Press Command-Option-P-R keys. When you keep all the keys held down, you will hear the startup chime over and over again (about every ten seconds) until you let go. After you hear the second chime, you can let go of the keys.
2. Does the computer display video after successfully resetting the computer's PRAM?

   Yes: Problem resolved. Restart the computer from the Apple menu and make sure the computer is starting up properly.

   No: Continue to the next step.

3. Check for external video. Connect an external monitor to the mini-VGA port. Do you have external video now?

   Yes: Replace the display/panel and then go on to step 4.

   No: Replace the midplane.

4. After replacing the display/bezel? Do you have video now?

   Yes: Problem solved.

   No: Replace the midplane.

Hard Drive

In a hard drive failure, the computer fails to boot to the desktop and may display a flashing question mark, or an alternating question mark and Mac OS (face o a folder)

1. Restart the computer with the Apple Hardware Test (AHT) disc that came with the computer. Run the Quick/Extended test.
2. Does the Apple Hardware Test test pass?

   Yes: Run Disk repair from the Install CD that came with the computer.

   No: Replace the component indicated by Apple Hardware Test, go on to the next step.
3. Does the computer start up properly now?

   Yes: Problem resolved.

   No: Reinstall system software. Go on to the next step.
4. Does the computer start up properly now?

   Yes: Problem resolved.

   No: Replace the hard drive. Does the computer work now?
   - **Yes**: Problem resolved.
   - **No**: Replace the midplane.

System hangs during normal startup process

1. Boot from the system CD that came with the computer and see if the hard drive mounts on the desktop.
2. Using Drive Setup, reinstall the system software drivers for the hard drive.
3. Using Drive Setup, reinitiation the hard drive.
4. Check all cable connections to and from the hard drive.
5. Replace the hard drive.
6. Replace the midplane assembly.

Flashing question mark appears on the screen

1. Boot from the system CD that came with the computer and see if the hard drive mounts on the desktop.
2. Launch Drive Setup. Reinstall the system software drivers for the hard drive.
3. If no hard drive is found in Drive Setup, verify the hard drive cable connections.
4. Reinstall system software. Backup the data first.
5. Reinitialize the hard drive.
6. Replace the hard drive.
7. Replace the midplane.

Optical Drive

CDs or DVDs don't show up on my desktop.

1. The first thing we should check is whether your drive can read discs normally. Try inserting an audio CD and check whether it shows up on your desktop or launches iTunes. Then eject it and insert the iMac Software Install and Restore disc that came with your computer. Are either of these discs recognized by the computer?

   Yes: It seems that some discs will show up on your Desktop, so the drive is OK - the problem is the individual discs that don't appear. Try cleaning these discs, and make sure they're in a format that can be read by your computer.

   No: So no disc will show up on your desktop. Go ahead and leave the iMac Software Install and Restore disc in your drive, and we're going to try a process that involves restarting your computer. Follow the instructions, below.
   - 1. Leave the iMac Install and Restore disc in the drive.
   - 2. Go to the Apple menu and choose Shut Down.
   - 3. Once the computer has shut down, hold down the OPTION button and press the power button to start the computer up again.
   - 4. You will see a blue background, a curly arrow and a right arrow, and between them is a button with the name of your hard drive. Wait about thirty seconds to see if another button comes up with the name iMac Software Install and Restore.
   - 5. After waiting about thirty seconds, choose the button with your hard drive's name, and click the right arrow button.
   - 6. The computer will start up normally. Open your browser and go back to the Apple support page at: www.apple.com/support”

2. When you were looking at the button with your hard drive's name on it, did a button with the iMac Software Install and Restore ever appear?

   Yes: The fact that the disc appeared there means your drive does know that a disc is in it. Let's check some system settings to see if they're the reason the discs don't appear.

No: The next thing to check to make sure the computer realizes the drive is there. From the Apple menu, choose About This Mac. From the window that pops up, click on More Info. An application called System Profiler should open.

In System Profiler, in the column on the left, look under Hardware for a line called S-ATA.

In the section on the right, you should see a header saying "S-ATA" and below it, two items. The first is your hard drive. The second is your optical drive. Do you see two items here?

- **Yes**: Even after checking for the drive in the startup manager, discs won't show up. This indicates that your optical drive needs to be replaced.
- **No**: Reseat the optical drive and check System Profiler again. Does the optical drive appear this time? If no, go on to the next step. If yes, it looks like the drive connection may not have been too great, but you've got it plugged in properly now.

3. Replace the optical drive.
4. Replace the midplane.

The computer won't burn discs.

1. The first thing we should check is whether your drive can read discs normally. Try inserting an audio CD and check whether it shows up on your desktop or launches iTunes. Then eject it and insert the iMac Software Install and Restore disc that came with your computer. Are either of these discs recognized by the computer?

   Yes: This is a good sign. So do you get a specific error message or error code when you try to burn a disc? Go on to step 2.

   No: So no disc will show up on your desktop. Go ahead and leave the iMac Software Install and Restore disc in your drive, and we're going to try a process that involves restarting your computer. Follow the instructions, below.

   - 1. Leave the iMac Install and Restore disc in the drive.
   - 2. Go to the Apple menu and choose Shut Down.
   - 3. Once the computer has shut down, hold down the OPTION button and press the power button to start the computer up again.
   - 4. You will see a blue background, a curly arrow and a right arrow, and between them is a button with the name of your hard drive. Wait about thirty seconds to see if another button comes up with the name iMac Software Install and Restore.
   - 5. After waiting about thirty seconds, choose the button with your hard drive's name, and click the right arrow button.
   - 6. The computer will start up normally. Open your browser and go back to the Apple support page at: www.apple.com/support"

2. Which of these error messages do you see?
   - **Unknown Error -2147352480**. See Knowledge Base article 25480 and 25750 for

more information.

- **Buffer underrun error**. See Knowledge Base article 25480 and 25750 for more information.
- **Unknown Error**. If you see “Unknown Error”, without “-2147352480”, you will want to see Knowledge Base article 152224 for more information.
- **None of these alert messages.** Is your disc drive the one inside the iMac, or is it attached to the iMac by a USB or FireWire cable?
  - Inside the Mac: Go on to step 3.
  - Attached by a cable: Go on to step 4.

3. So you can see other discs, it's just that they don't burn. Have you tried discs of other brands? Sometimes certain discs won't burn, either because of quality or because they're damaged or old. Try purchasing a different brand of discs and test to see whether these discs will burn. Do the new discs burn correctly?

   Yes: Great! It looks like the issue can be isolated to the old discs you were using. For whatever reason, they don't seem to be working, so you'll want to use the new discs from now on.

   No: So your new discs didn't work either. What sort of disc are you trying to burn - is it a CD or a DVD?
   - CD: You said you're having problems burning CDs. Let's try an easy question first. In your Finder, open a window and select your hard drive. At the bottom of the window, does it say you have at least a gigabyte (1 GB) free? If no, go to step 5.
   - DVD: The first thing we should check is whether your drive can read DVDs normally. Try inserting the iMac Software Install and Restore disc that came with your computer. If you still have problems, go to step 6.

4. We don't have the capacity to troubleshoot an external drive - if you are having problems with a drive other than the internal one, you will need to talk to the manufacturer of that drive.

5. When the computer burns a CD, it needs some free space on the hard drive for it to do what it needs to do when it burns a disc. Try freeing up some space on the computer by emptying trash and deleting unneeded items. Once you have at least one gigabyte free and you've emptied the trash, try burning a disc again. Does it burn correctly now?

   Yes: Problem solved.

   No: When you try to burn a CD, are you burning a disc from the Finder, from iTunes, or from a different application? Refer to Knowledge Base articles 151904, 150293,151701, and 153426 for disc burning issues. Does it burn a disc now?
   - **Yes**: Problem solved.
   - **No**: Go on to the next step.

6. Reinstall the system software. Print Knowledge Base article 151641 and follow the steps. Try burning a disc again. Did the disc burn correctly?

   Yes: Problem solved.

No: Replace the optical drive. Does it burn correctly now?
  - **Yes**: Problem solved.
  - **No**: Replace the midplane.

Inserting Discs Issue

1. Is there a disc already in the drive? Refer to Knowledge Base article 106752, “Macintosh: How to Eject a Disc When Other Options Do Not Work”.
2. Check System Profiler. In System Profiler, in the column on the left, look under Hardware for a line called S-ATA.

   In the section on the right, you should see a header saying “S-ATA” and below it, two items. The first is your hard drive. The second is your optical drive. Do you see two items here?

   Yes: Problem solved. Run diagnostics and trying inserting a disc again.

   No: Remove the back cover and reseat the optical drive. Can you insert a disc now?
   - **Yes**: Problem solved.
   - **No**: Replace the optical drive. If this doesn’t solve the problem, go on to the next step.
3. Replace the midplane.

Optical disc constantly ejects

1. Disconnect all peripheral devices, especially the mouse in cases where the disc is constantly ejecting.
2. Try cleaning the disc. If it is dirty or scratched, it may not mount.
3. Try a different disc.
4. Boot from Apple Hardware Test (hold down the “C” key at startup) or boot from the system install CD (use Startup Manager, hold down the Option key at startup).
5. Perform a clean install with the CD that came with the computer.
6. Reseat the optical drive.
7. Replace the optical drive.
8. Replace the miplane assembly.

Error Beeps

1. Check the memory modules. iMac G5 computers work with memory modules (DIMMs) that meet all of these criteria: PC3200, 2.5V, unbuffered, 8-byte, nonparity, 184-pin, 400Mhz DDR SDRAM. If the user installs a DIMM that uses EDO or SGRAM devices, the computer will beep several times when the user attempts to restart the computer.
2. Reseat the memory.
3. Replace the memory.
4. Replace the midplane.

AirPort

Not able to connect wirelessly with AirPort

1. From the Apple menu, choose About this Mac.
2. Click on More Info. System Profiler should open.
3. In System Profiler, in the column on the left, look under Hardware for a line called “AirPort Card”. Select that line.
4. Does the section to the right say “No Information Found”?

   Yes: It looks like your computer doesn't realize it has an AirPort card installed. Go on to step. 5

   No: It looks like your iMac recognizes that it has an AirPort Card installed. Go on to step 6.
5. Remove the back cover and reseat the AirPort Extreme card. Check System Profiler again to see if the computer sees the AirPort card. Does it recognize the card now?

   Yes: Problem solved.

   No: Replace the AirPort Extreme card.
6. Now that we know your iMac recognizes your AirPort card, check your antenna. If the AirPort antenna is not plugged in all the way, you may have very short AirPort range.
7. Remove the back cover. Reconnect the antenna cable to the AirPort card. Press the antenna connector firmly, to make sure it's fully connected to the iMac. You should be ready to go wireless now.
8. If your antenna is plugged in properly and your AirPort card is recognized there are a number of other things that could cause issues with wireless networking. Refer to Knowledge Base document 106858 for more networking information.
9. Replace the AirPort card/
10. Replace the midplane.

My AirPort signal seems to be very week

1. Check your antenna. If the AirPort antenna is not plugged in all the way, you may have very short AirPort range.
2. Remove the back cover. Reconnect the antenna cable to the AirPort card. Press the antenna connector firmly, to make sure it's fully connected to the iMac. Replace the cover and reconnect the power cord.
3. Try connecting to your wireless access point now. Did your reception improve?

   Yes: It looks like the AirPort antenna had not been plugged in all the way. You should be ready to go wireless now.

   No: It continues like your antenna is plugged in properly and your AirPort card is recognized. However, there are a number of other things that could cause issues with wireless networking. Refer to Knowledge Base document 106858 for more networking information.
4. Replace the AirPort card/
5. Replace the midplane.

Speakers

I don’t hear sound from the speakers.

1. Press the F5 button on your keyboard. It has a sound icon on it. Do you hear sound now?

   Yes: It looks like your volume was muted. When this happens again, just press the F4 and F5 keys to regulate your volume.

   No: Are there any external microphones, speakers or headphones plugged into the iMac? If yes, go on to step 2. If no, go on to step 3.

2. Disconnect your external microphones, speakers, or headphones. Do you hear sound now?

   Yes: It looks like the built-in speakers are working properly. Now try plugging in a different set of speakers or headphones. Go on to step 4.

   No: Unplug any USB devices you have plugged into your iMac except the mouse and keyboard. Do you hear sound now? Go on to step 3.

3. Unplug any USB devices you have plugged into your iMac except the mouse and keyboard. Do you hear sound now?

   Yes: It sounds like you may have a USB Audio device plugged into your iMac such as a USB microphone adapter or USB speakers. Please work with the manufacturer to troubleshoot this issue.

   No: Reset your computer's PRAM (Parameter RAM), which stores settings for sound and go to step 5.

4. With new speakers or headphones plugged in, do you have audio?

   Yes: It appears that the issue may be with the external microphone, speakers or headphones that were plugged into your iMac originally. Work with the manufacturer to troubleshoot the speakers or headphones

   No: It looks like there may be something wrong with the audio output port on your iMac. Replace the midplane assembly.

5. After resetting the PRAM, do you hear sound now?

   Yes: Test the audio again. Open System Preferences and check the Sound icon. Make sure the preferences are set correctly. Problem resolved.

   No: Replace the midplane

I hear sound out of only one speaker.

1. Are there any external microphones, speakers or headphones plugged into the iMac?

   Yes: Disconnect any external microphones, speakers, or headphones. Do you hear audio from both of the built in speakers on your iMac?
   - **Yes**: Good. It looks like the built-in speakers are working properly. This may be an issue with the microphone, speakers or headphones that were plugged into your iMac. Please work with the manufacturer to troubleshoot this issue.
   - **No**: Go to step 2.

   No: Check your speaker balance. If your balance setting was set to the left or right speaker, you would only hear sound from one speaker. Go to step 2.

2. Open System Preferences. (System Preferences can be found under the Apple menu.)
3. Click once on the sound icon.
4. Click once on the Output tab.
5. Make sure your balance setting is in the middle. After adjusting the audio balance, do you have audio from both speakers now?

   Yes: It looks like the issue was the balance was not set properly.

   No: Replace the midplane assembly.

Mouse

My mouse doesn’t work at all.

1. Try using the mouse on another surface. Non-reflective, opaque surfaces without repetitive patterns work best. The surface should be clean, but not shiny.
2. Unplug any USB devices plugged into your computer, other than the Apple Mouse and Apple Keyboard.
3. Try another known good USB mouse.
4. Replace the mouse.
5. Replace the midplane.

My mouse works intermittently (the cursor freezes randomly).

1. Unplug any USB devices plugged into your computer, other than the Apple Mouse and Apple Keyboard.
2. Reconnect the USB devices one by one and test your mouse after each to figure out which device is causing the issue. Once you have isolated the “problem child” that isn't playing well with others, you will want to contact the manufacturer of that device to see if they have any suggestions or assistance.

3. Try a known good USB mouse.
4. Replace the mouse.
5. Replace the midplane.

The mouse is slow to respond.

1. Try putting the mouse on a different surface - an opaque surface with no patterns is best.
2. Adjust the settings on the mouse.
   - Choose Apple menu > System Preferences and click Keyboard & Mouse.
   - Click Mouse.
   - Drag the Tracking Speed slider to select how fast the pointer moves. Drag the Double-Click Speed slider to set how fast you have to double-click.
3. If the mouse still doesn’t work, insert the iMac Software Install and Restore disc that came with your computer. Shut the computer down and then start it up while holding down the letter “c” on the keyboard. Does the mouse work when the computer is started up from this disc?
4. Try a known good USB mouse.
5. Replace the mouse.
6. Replace the midplane.

Keyboard

None of the keys on my keyboard work.

1. Unplug all devices from your computer, including your mouse and keyboard as well as printer, scanner, external hard drives, and hubs. (Warning: Some devices may require you to perform steps before it is safe to unplug them, e.g, external storage devices.) Be sure to unplug your hub, if you have one.
2. Plug your keyboard into the back of your computer firmly and securely. Plug your mouse into the back of your computer firmly and securely. Take special care to make sure the connector is completely in the socket. Go on to step 3.
3. Does your keyboard work now?

   Yes: Problem solved.
   No: Unplug your keyboard and plug it into another USB slot on the back of your iMac Does it work now?
   - **Yes**: Replace the midplane.
   - **No**: Unplug your keyboard and plug your mouse into the port the keyboard just occupied. Go on to step 4.

4. Does your mouse work now?

   Yes: Replace the keyboard.

   No: Replace the midplane assembly.

Certain keys don't work.

1. Unplug all devices from your computer, including your mouse and keyboard as well as printer, scanner, external hard drives, and hubs. (Warning: Some devices may require you to perform steps before it is safe to unplug them, e.g, external storage devices.) Be sure to unplug your hub, if you have one.
2. Plug your keyboard into the back of your computer firmly and securely. Plug your mouse into the back of your computer firmly and securely. Take special care to make sure the connector is completely in the socket. (Note that USB plugs can only work one way up, and if you try them upside-down they won't slide together properly.) Go on to the next step.
3. Does your keyboard work now?

   Yes: Problem solved.
   No: Unplug your keyboard and plug it into another USB slot on the back of your iMac Does it work now?
   - **Yes**: Replace the midplane.
   - **No**: Unplug your keyboard and plug your mouse into the port the keyboard just occupied. Go on to step 4.
4. Does your mouse work now?

   Yes: Replace the keyboard.

   No: Replace the midplane assembly.
   -

My keys are sticky or slow to respond.

1. Try a known good keyboard.
2. Open System Preferences. Click on the keyboard and mouse icon. Adjust the “key repeat speed and delay until repeat” rate.
3. Replace the keyboard.

When I type, strange characters appear on the screen.

1. Depending on your iMac's settings, a simple keystroke can change your keyboard from English to Japanese. This can result in some pretty funny characters showing up when you type. To switch to the US keyboard,
2. Open System Preferences.
3. Click on the International icon.
4. Click on the Input Menu near the top of the screen.
5. Scroll down the list and uncheck any non-US keyboard layouts.
6. Close the System Preferences. Try typing a few characters. Did is solve the problem?

   Yes: Problem solved.

   No: Replace the keyboard.

The USB port on my keyboard doesn't work.

1. Unplug all devises from your keyboard.
2. Plug your Apple mouse into the left USB port on your keyboard. Does your mouse work when it's plugged into this port?

   Yes: Now plug the mouse into the right port. Does it work?
   - **Yes**: Try a known good keyboard.
   - **No**: Try a known good mouse to rule out the mouse. Then go to step 3.

   No: Try a different mouse or keyboard.
3. Now unplug the keyboard from the USB port on the back of the iMac, and plug the mouse into the port the keyboard had been in. Does the mouse work now?

   Yes: Replace the keyboard?

   No: It appears that your USB port isn't functioning properly. Go on to step 4.
4. Replace the midplane.

Error Beep(s)

Computer beeps at startup.

1. Check that the memory DIMMs are iMac G5 compliant. iMac G5 computers work with memory modules (DIMMs) that meet all of these criteria: PC3200, 2.5V, unbuffered, 8-byte, nonparity, 184-pin, 400Mhz DDR SDRAM.

   There are two RAM slots. The maximum amount of RAM you can install is 2 GB. You can use RAM module sizes of 256 MB, 512 MB and 1 GB, in either slot.

   DIMMs with any of the following features are not supported in the iMac G5 computer: registers or buffers, PLLs, ECC, parity, or EDO RAM.
2. Reseat the memory into the slot.
3. Replace the memory.
4. Replace the midplane.

USB

A USB device doesn't work

1. Please unplug all of your USB devices from your iMac except your Apple Keyboard and Apple mouse.
2. Now plug your device directly into the back of your iMac. Does it work as expected now?

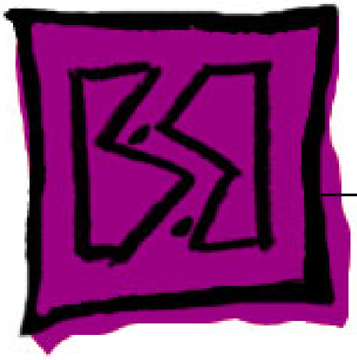
   Yes: Your device works when plugged directly into the computer. This indicates a conflict with one of the other USB devices. You can test by gradually adding your devices back and seeing where the issue occurs, then contacting the manufacturer of the device(s) for assistance.

   No: Unplug your device from the iMac and plug the keyboard into the port your device just occupied. Is your keyboard still working?
   - **Yes: Your** Apple Keyboard works when plugged into the USB port your device was plugged into. This points to an issue with your device. Please review the documentation that came with your device. Install any necessary drivers and contact the manufacturer of your device for assistance.
   - **No: Replace** the midplane

I see a message saying not enough power to function.

It appears that this device needs to be plugged into the computer's USB port, rather than the keyboard USB port. Any USB device connected to the keyboard needs to be either a self-powered device (a USB device with its own AC power supply), or a low-power device (a device that does not need a large amount of voltage to operate). Your device may draw more power than the keyboard can provide.

Service Source

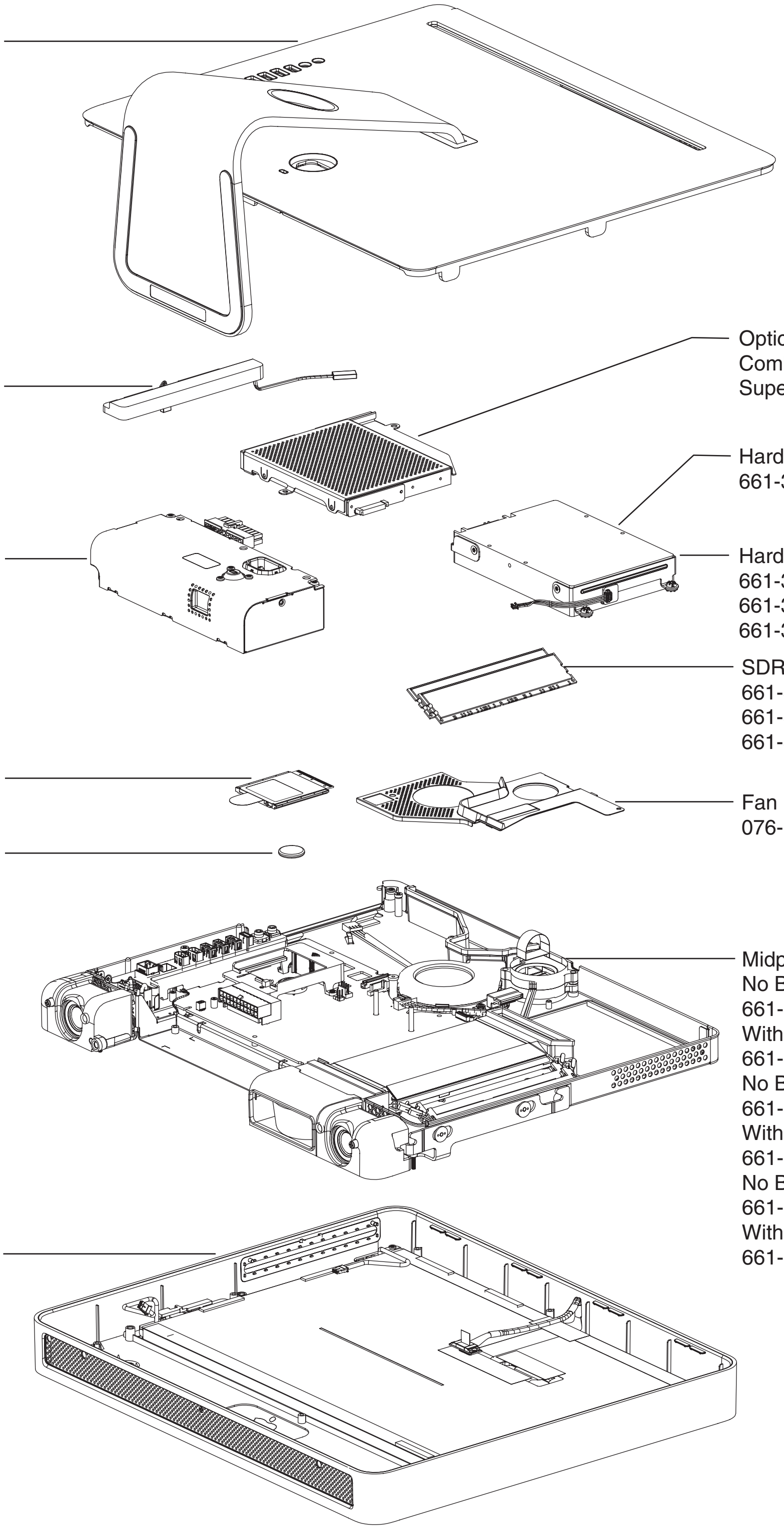


Views

iMac G5 (17-inch)

© 2004 Apple Computer, Inc. All rights reserved.

iMac G5 (17-inch)



Back Cover
076-1113, Non PFC
076-1114, PFC

Optical Drive
Combo 661-3271
Super 661-3272

Inverter
661-3294

Hard Drive, PATA
661-3342 40 GB

Power Supply
661-3290, PFC

Hard Drive, SATA
661-3341 80 GB
661-3340 160 GB
661-3347 250 GB

SDRAM, DDR400
661-3286 256MB
661-3287 512 MB
661-3288 1 GB

AirPort Extreme Card
661-3045

Fan Cover
076-1104

Battery
076-1098

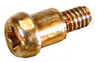
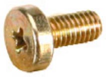
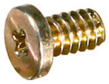
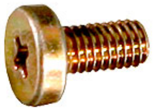
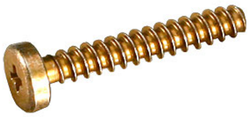
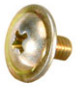
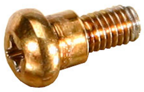
Midplane
No Bluetooth, 1.8 GHz
661-3296
With Bluetooth, 1.8 GHz
661-3315
No Bluetooth, 1.6 GHz
661-3297
With Bluetooth, 1.6 GHz
661-3316
No Bluetooth, No Optical, 1.6 GHz
661-3321
With Bluetooth, No Optical, 1.6 GHz
661-3317

Display and Bezel
661-3319, w/Optical Slot
661-3320,
No Optical Slot

Screw Matrix and Part Numbers

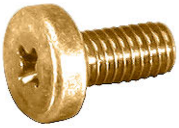
iMac G5 (17-inch)

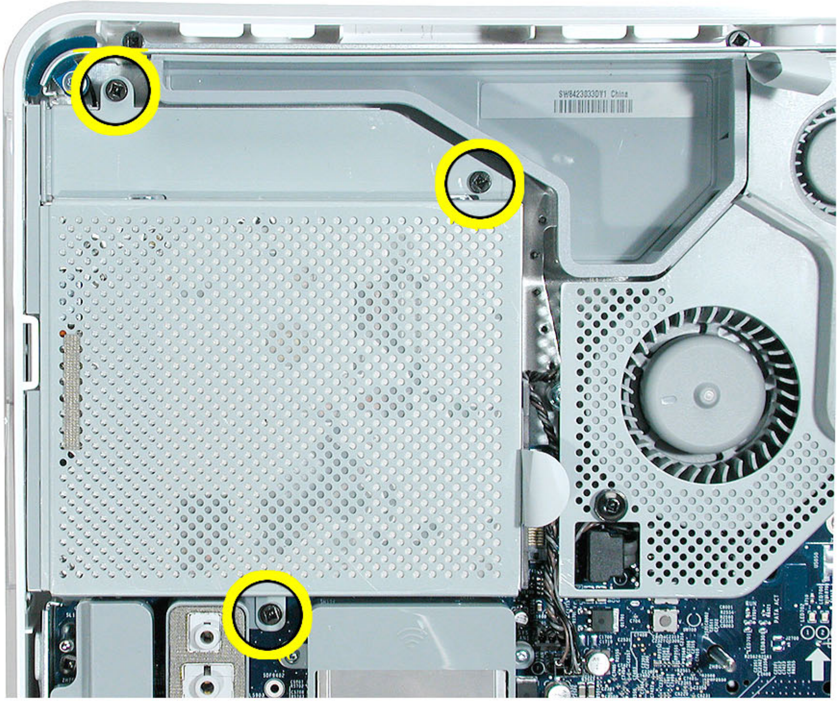
Note: These are not to scale.

922-6659  • Video cable to midplane (2)	**922-6661**  • Fan cover to hard drive (1)	**922-6662**  • Midplane to front bezel (4)
922-6665  • Inverter to midplane (1) • Optical drive to midplane (3)	**922- 6666**  • Logic board to midplane to front bezel (3)	**922-6668**  • Hard drive bracket to midplane (3)
922-6669  • Fan cover to midplane (1)		

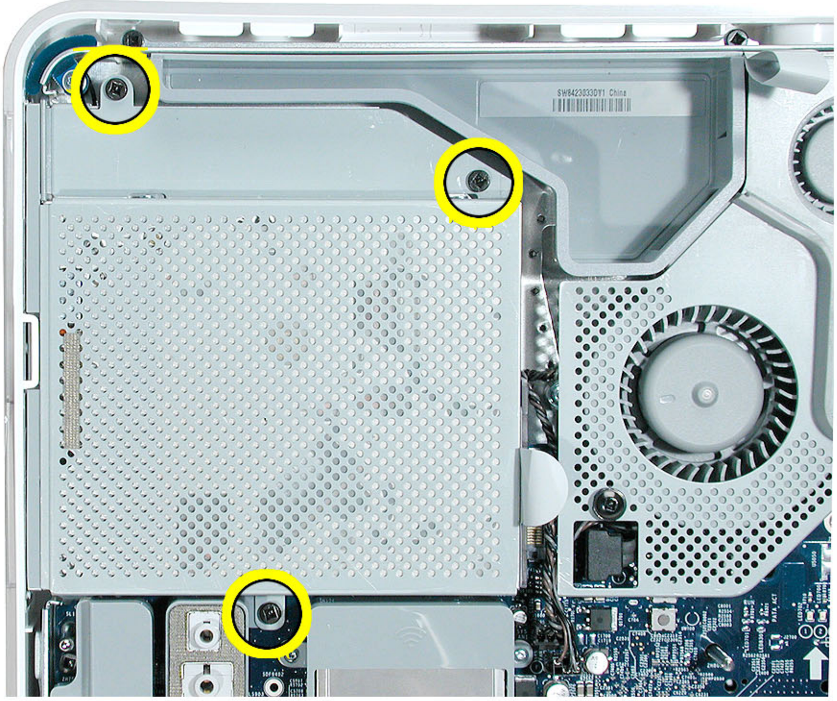
Screw Locators

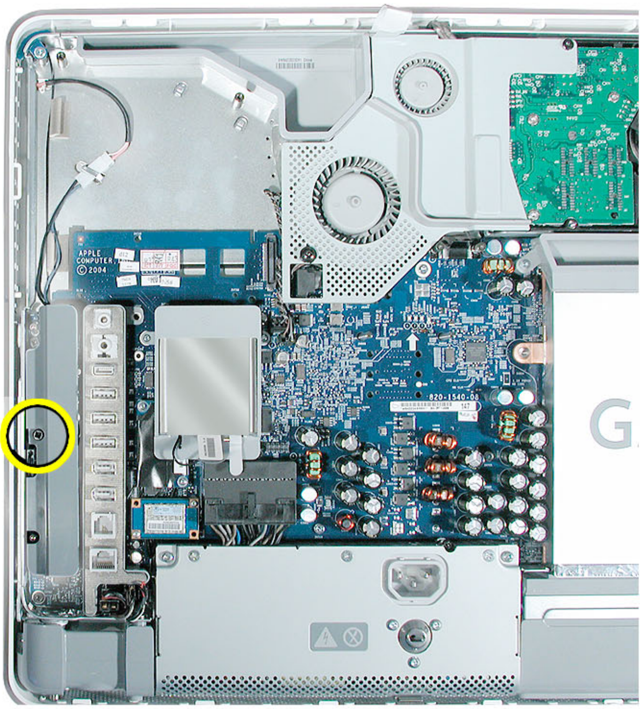
To Access the Optical Drive



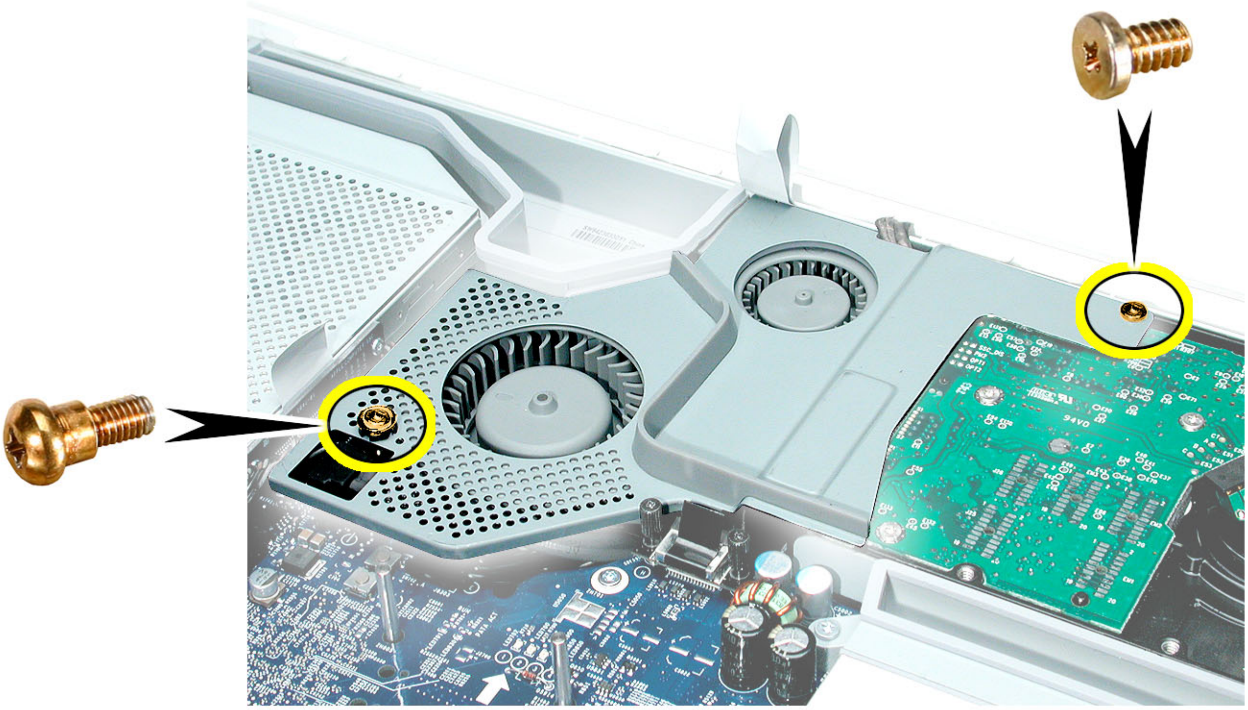


To Access the Inverter

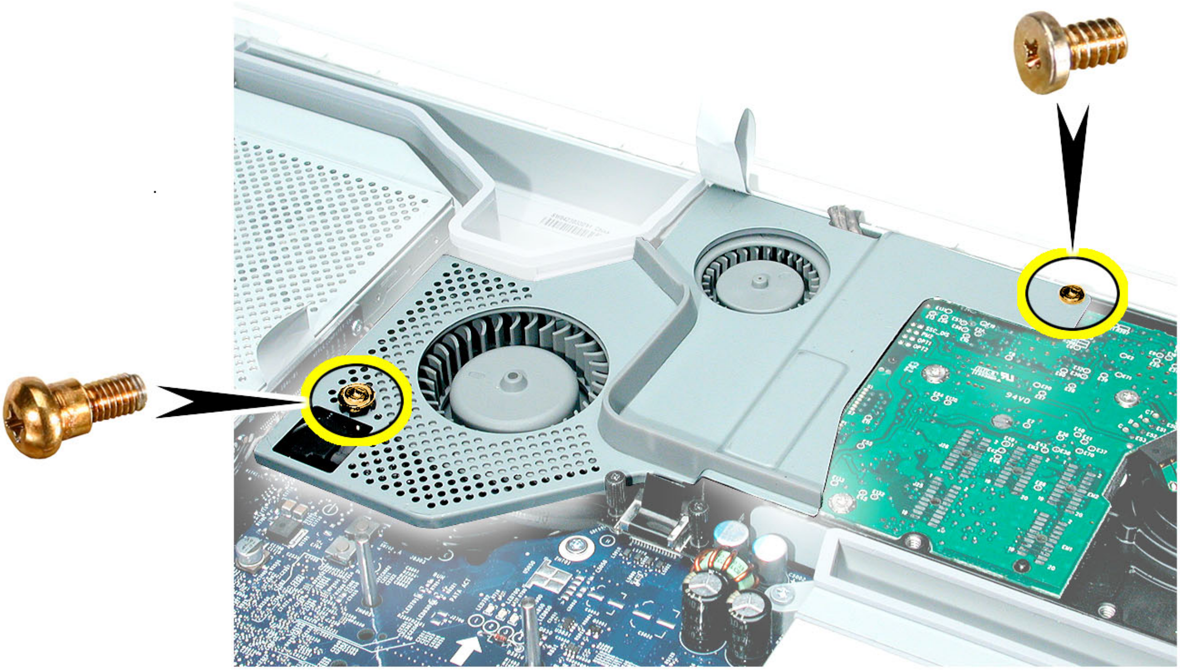


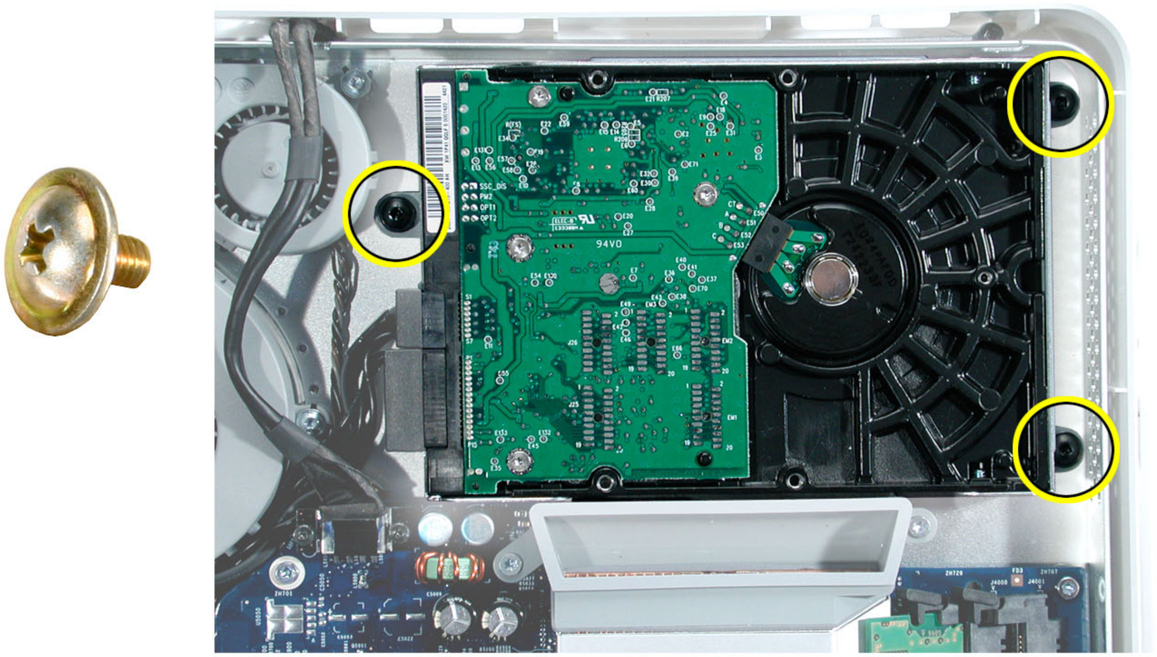


To Access the Fan Cover

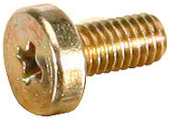


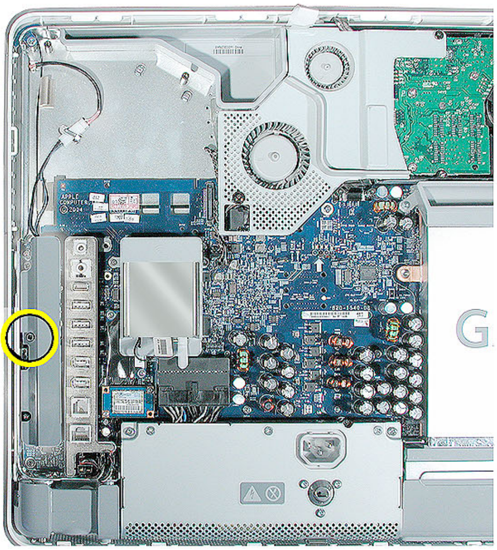
To Access the Hard Drive

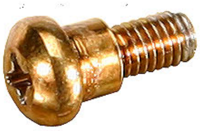


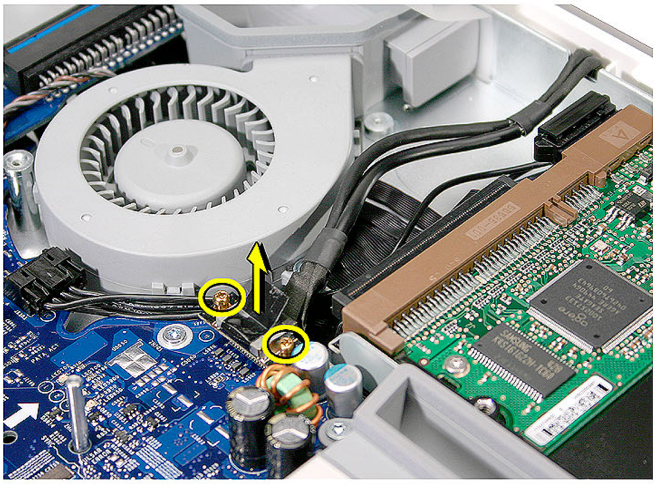


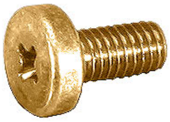
To Access the Display/Bezel-Part 1

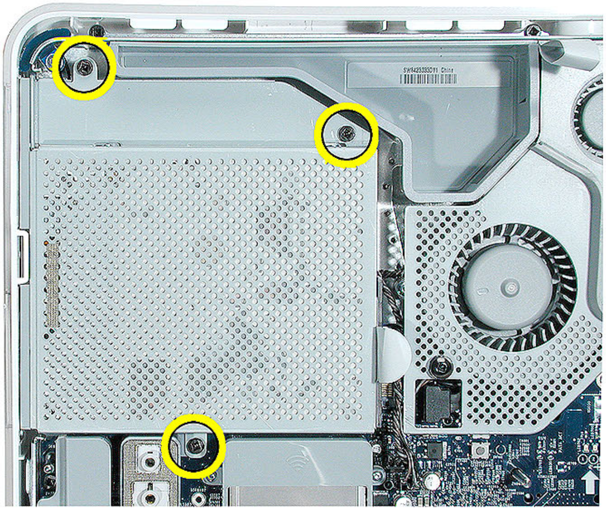




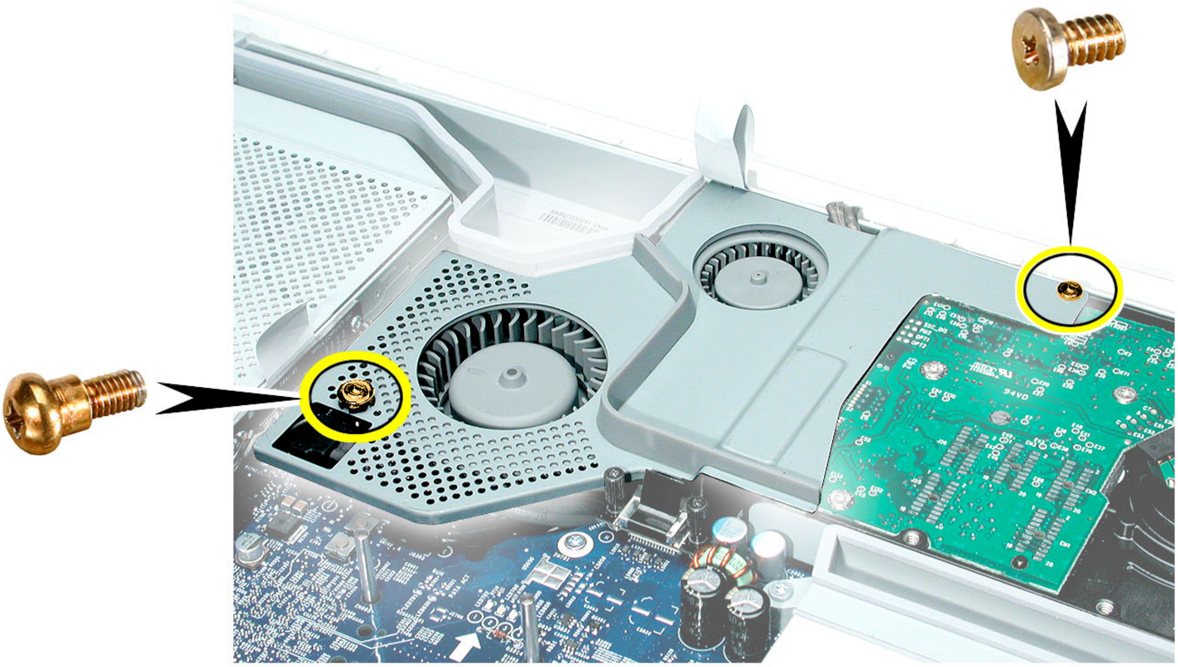


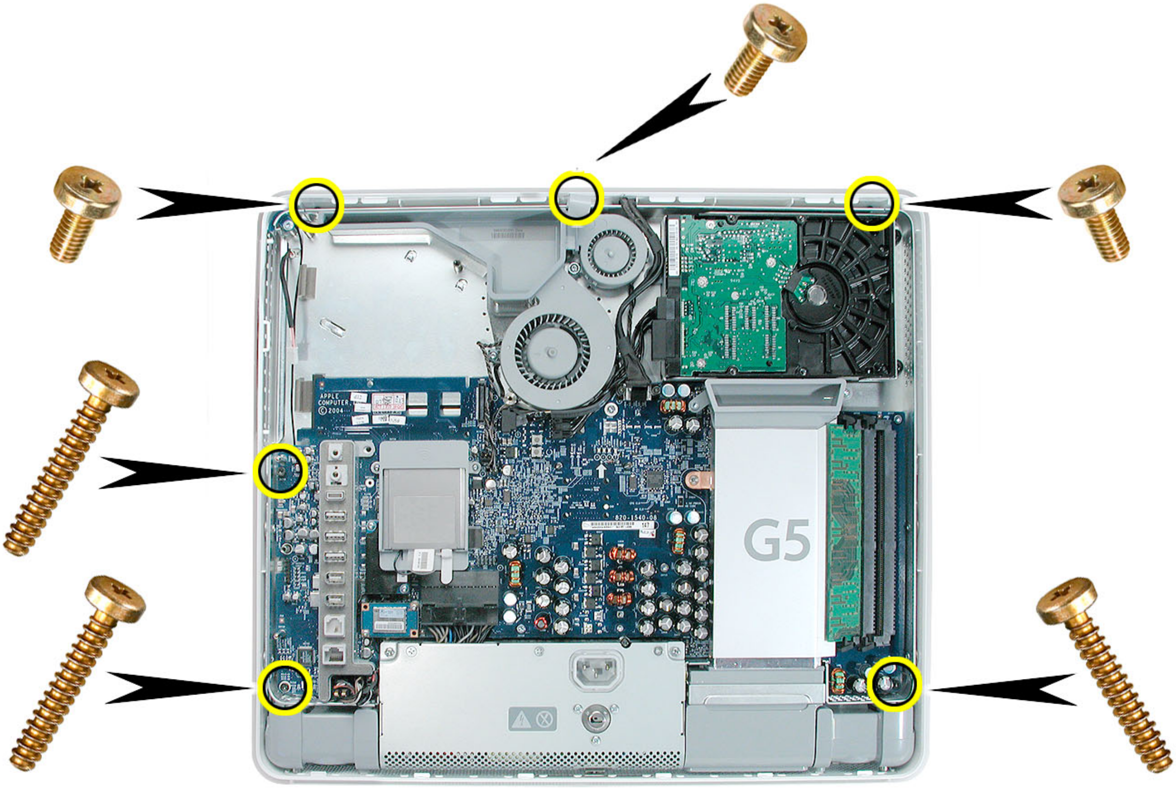




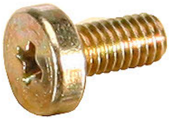


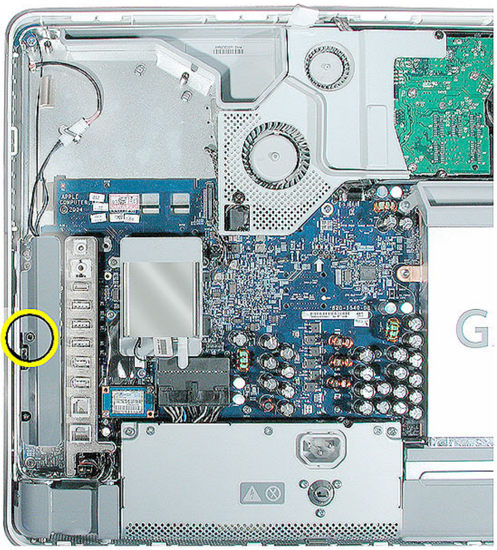
To Access the Display/Bezel-Part 2

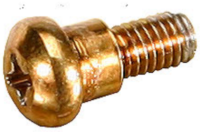


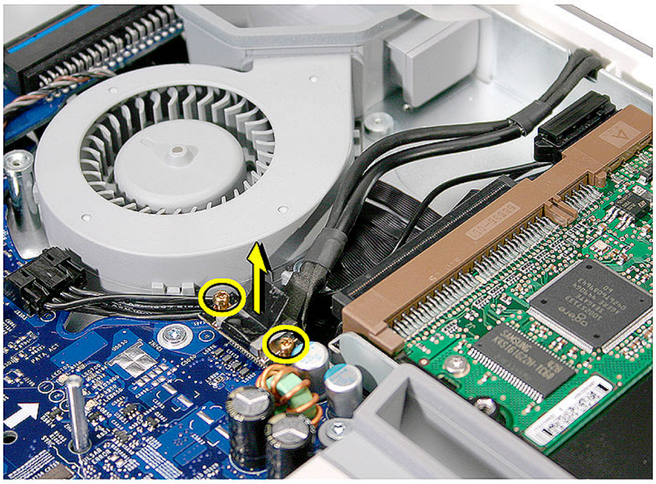


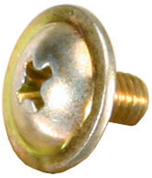
To Access the Midplane Assembly-Part 1

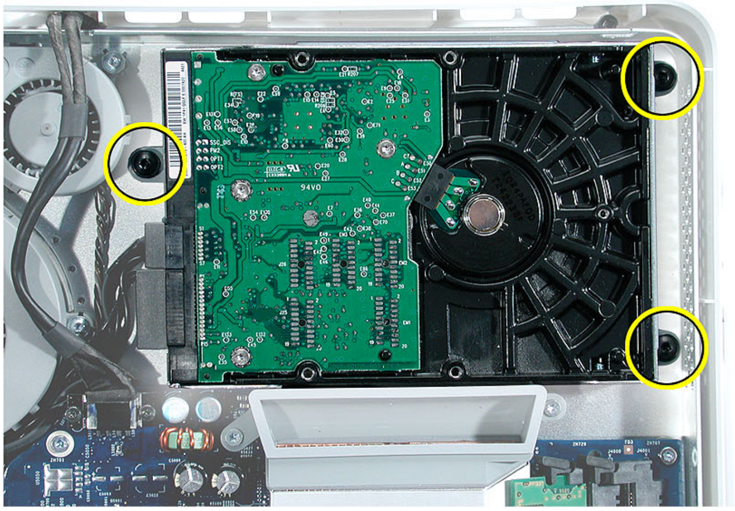




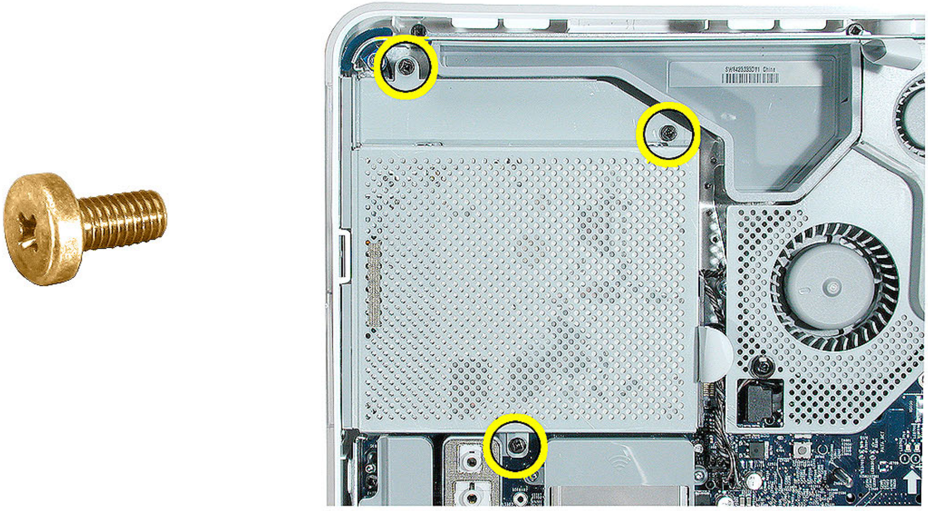


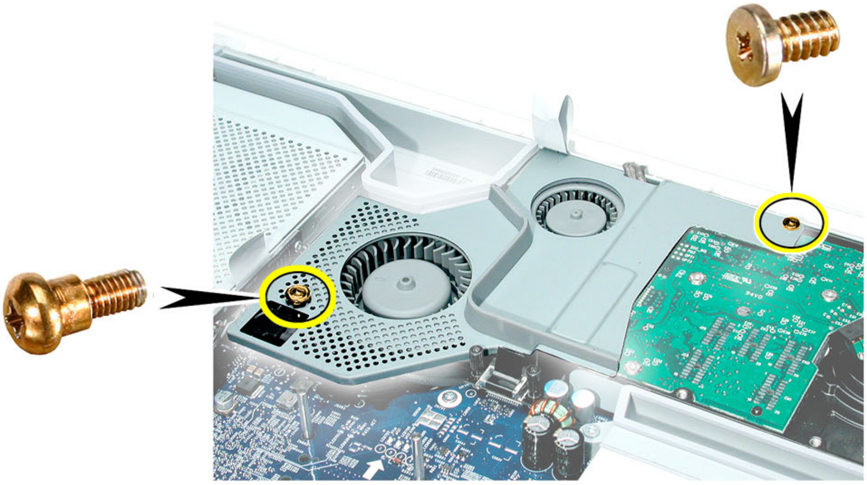


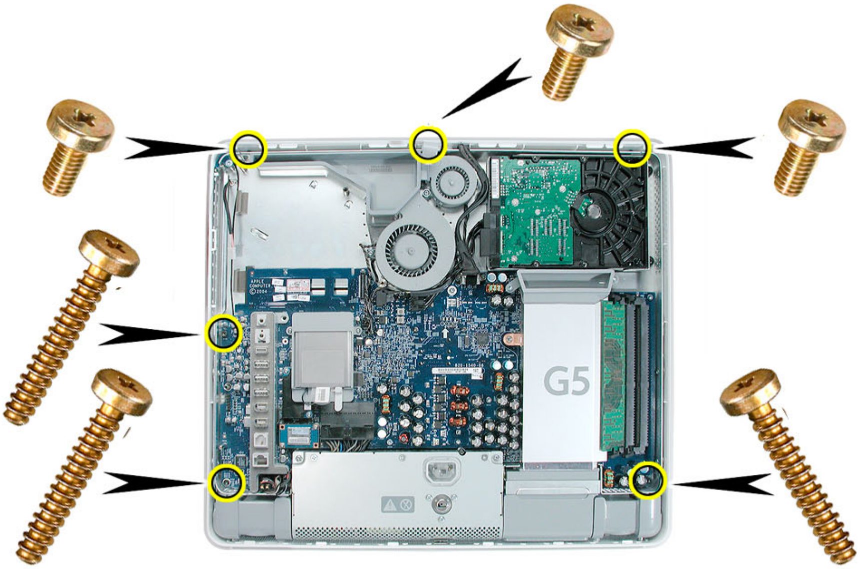




To Access the Midplane Assembly-Part 2



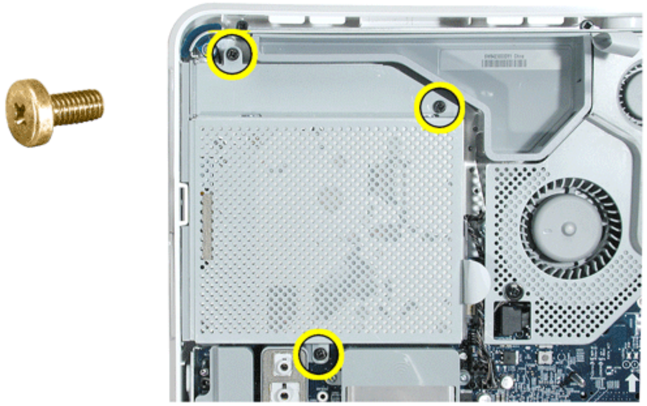




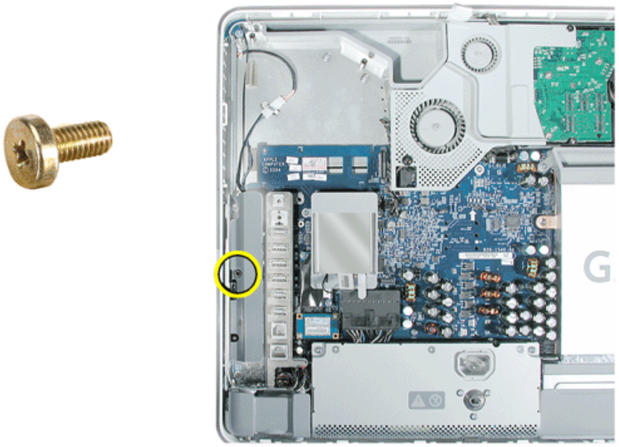
iMac G5 (17-inch)* Screw Locations

There are some components that have additional captive screws that must be loosened to allow removal. Please see the take apart documentation for details. All customer removable screws are brass colored. Do not remove screws unless they are brass colored, or you will void your warranty.

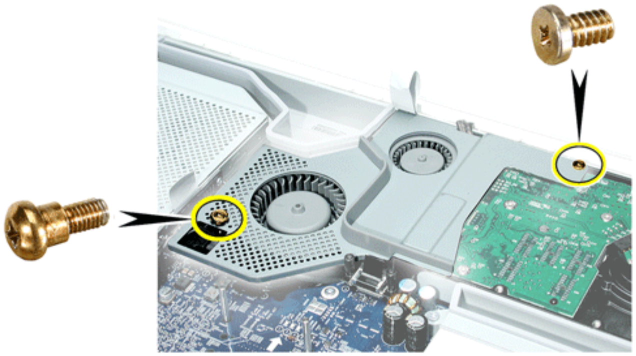
Optical Drive (3 screws)



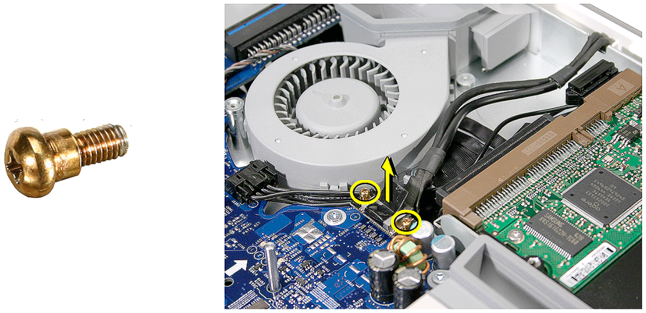
Inverter (1 screw)



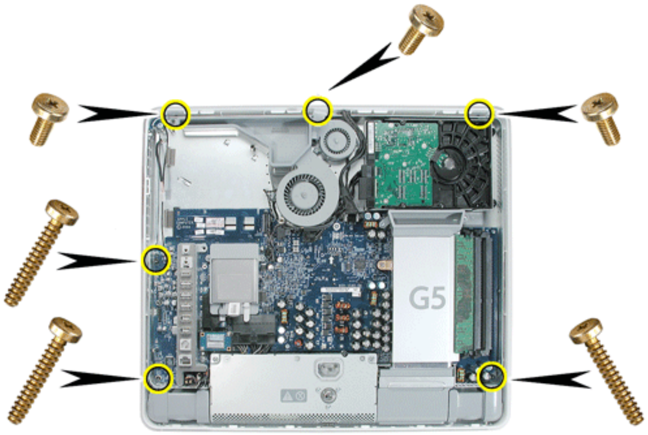
Fan Cover (2 screws)



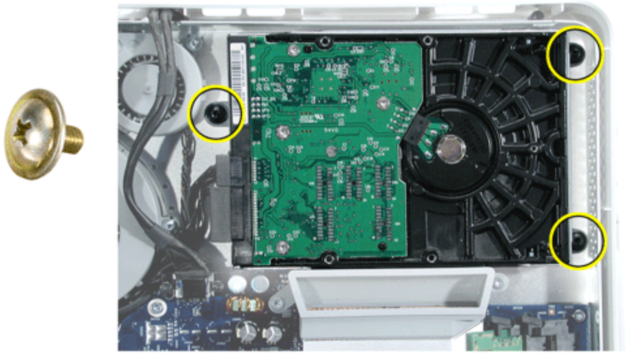
Video Cable (2 screws)



Midplane (6 screws)



Hard Drive (3 screws)



***Note:** *Education units do not not include the optical drive or fan cover components.*

Copyright ©2004 by Apple Computer Inc. All Rights Reserved. Do NOT forward, copy, or otherwise replicate or disseminate verbally, electronically, or in hardcopy, unless Apple has given prior written authorization.